

# YS25-Class II SERIES

## 42W



### Features

- Energy efficiency level VI
- Class II Power Supply
- 3 Years Warranty
- Universal AC input/Full range
- No load power consumption < 0.1W
- Protections: Short Circuit /Over Load / Over Voltage
- -30~+70℃ wide range working temperature

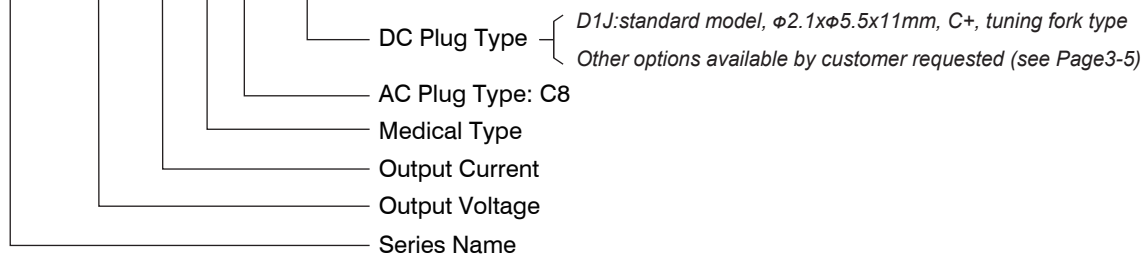
### Applications

- Blood glucose meter
- Blood pressure meter
- Nebulizer/Inhaler
- Portable medical device



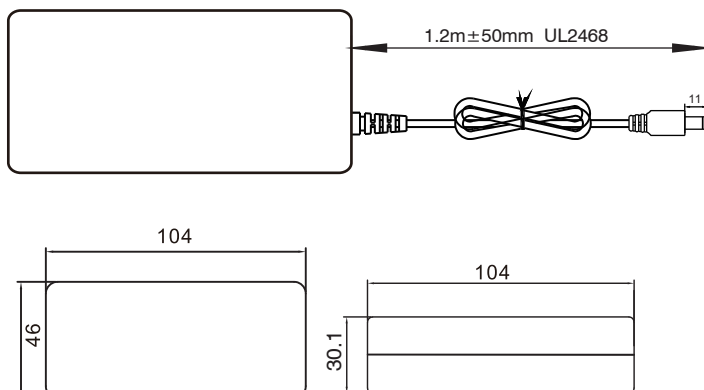
### Model Description

YS25 - XXXYYYYM-□ - D1J



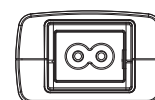
### Dimensions and installation

(Unit: mm , tolerance:  $\pm 1\text{mm}$ )



| Standard Cable | 1.2m UL2468 (Option: UL2464, UL1185) |
|----------------|--------------------------------------|
| 9 ~ 24V        | 20AWG                                |
| 36 ~ 48V       | 22AWG                                |

Outside ⊖ ⊕ Inside



C8

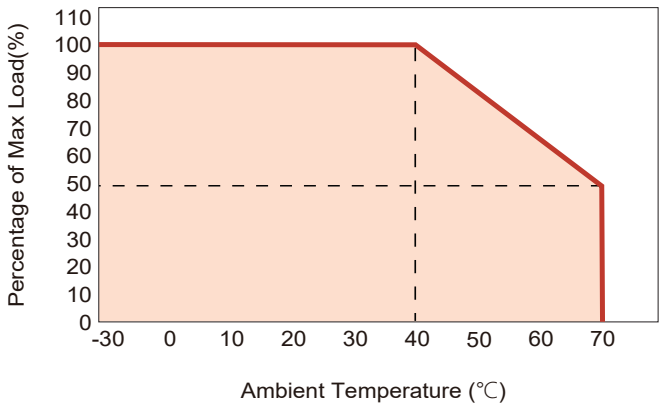
# Specification

| Model      | Order P/N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | YS25-0903500<br>M-C8-D1J                                                          | YS25-1203500<br>M-C8-D1J | YS25-1502800<br>M-C8-D1J | YS25-2401750<br>M-C8-D1J                                                  | YS25-3601160<br>M-C8-D1J | YS25-4800875<br>M-C8-D1J |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------|--------------------------|--------------------------|
|            | Safety Model No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | YS25-0903500M                                                                     | YS25-1203500M            | YS25-1502800M            | YS25-2401750M                                                             | YS25-3601160M            | YS25-4800875M            |
| Output     | DC Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 9V                                                                                | 12V                      | 15V                      | 24V                                                                       | 36V                      | 48V                      |
|            | Rated Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.5A                                                                              | 3.5A                     | 2.8A                     | 1.75A                                                                     | 1.16A                    | 0.875A                   |
|            | Rated Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 31.5W                                                                             | 42W                      | 42W                      | 42W                                                                       | 42W                      | 42W                      |
|            | Ripple & Noise(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 100mVp-p                                                                          | 150mVp-p                 | 150mVp-p                 | 200mVp-p                                                                  | 300mVp-p                 | 400mVp-p                 |
|            | Voltage Tolerance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ±5%                                                                               | ±5%                      | ±5%                      | ±5%                                                                       | ±5%                      | ±5%                      |
|            | Line Regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ±3%                                                                               | ±3%                      | ±3%                      | ±3%                                                                       | ±3%                      | ±3%                      |
|            | Load Regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ±5%                                                                               | ±5%                      | ±5%                      | ±5%                                                                       | ±5%                      | ±5%                      |
|            | Setup,Rise,Hold up Time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.5s,30ms,120ms/230VAC(at full load)1.0s,30ms,12ms/115VAC(at full load)           |                          |                          |                                                                           |                          |                          |
| Input      | Rated Voltage Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100-240VAC                                                                        |                          |                          |                                                                           |                          |                          |
|            | Voltage Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 90-265VAC                                                                         |                          |                          |                                                                           |                          |                          |
|            | Frequency Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 50/60Hz                                                                           |                          |                          |                                                                           |                          |                          |
|            | AC Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.1A/115VAC0.6A/230VAC                                                            |                          |                          |                                                                           |                          |                          |
|            | Inrush Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Cold Start 60A/200us at 230VAC 50HzCold Start 40A/200us at 115VAC 50Hz            |                          |                          |                                                                           |                          |                          |
|            | Leakage Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.1mA/230VAC                                                                     |                          |                          |                                                                           |                          |                          |
|            | Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 86.8%                                                                             | 88.5%                    | 88%                      | 88%                                                                       | 88.5%                    | 88.5%                    |
|            | No Load Power Consumption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <0.1W                                                                             |                          |                          |                                                                           |                          |                          |
| Protection | Over Load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 105~150%<br>Hiccup mode, recovers automatically after fault condition is removed. |                          |                          |                                                                           |                          |                          |
|            | Short Circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Shut down o/p voltage, re-power on to recover.                                    |                          |                          |                                                                           |                          |                          |
|            | Over Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 120~180%<br>Shut down o/p voltage, re-power on to recover.                        |                          |                          |                                                                           |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                   |                          |                          |                                                                           |                          |                          |
| Ambient    | Working TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -30 ~ +70 ℃ (Please refer to “Derating Curve”section)                             |                          |                          |                                                                           |                          |                          |
|            | Working Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20 ~ 95%RH Non-condensing                                                         |                          |                          |                                                                           |                          |                          |
|            | Storage TEMP. Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -40 ~ +85 ℃ ,10 ~ 95%RH Non-condensing                                            |                          |                          |                                                                           |                          |                          |
|            | TEMP. Coefficient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ±0.03%/ (0 ~ 40 ℃ )                                                               |                          |                          |                                                                           |                          |                          |
|            | Vibration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes           |                          |                          |                                                                           |                          |                          |
| Safety     | Safety Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EN60601-1                                                                         |                          |                          |                                                                           |                          |                          |
|            | Withstand Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I/P-O/P: 4KVAC/1min                                                               |                          |                          |                                                                           |                          |                          |
|            | Isolation Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I/P-O/P:100M Ohms / 500VDC / 25 ℃ / 70% RH                                        |                          |                          |                                                                           |                          |                          |
| EMC        | EMC Emission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Parameter                                                                         | Standard                 |                          | Test Level                                                                |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Conducted                                                                         | EN55032(CISPR32)         |                          | CLASS B                                                                   |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Radiated                                                                          | EN55032(CISPR32)         |                          | CLASS B                                                                   |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Harmonic Current                                                                  | EN61000-3-2              |                          | CLASS B                                                                   |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Voltage flicker                                                                   | EN61000-3-3              |                          | CLASS B                                                                   |                          |                          |
|            | EMC Immunity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Parameter                                                                         | Standard                 |                          | Test Level                                                                |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ESD                                                                               | EN61000-4-2              |                          | Level 3, 8KV air, criteria A                                              |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Radiated Susceptibility                                                           | EN61000-4-3              |                          | Level 3, criteria A                                                       |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EFT/Burest                                                                        | EN61000-4-4              |                          | Level 3, criteria A                                                       |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Surge                                                                             | EN61000-4-5              |                          | Level 4, 2KV/L-N, criteria A                                              |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Conducted                                                                         | EN61000-4-6              |                          | Level 3, criteria A                                                       |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Magnetic Field                                                                    | EN61000-4-8              |                          | Level 4, criteria A                                                       |                          |                          |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Voltage Dips and interruptions                                                    | EN61000-4-11             |                          | > 95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods |                          |                          |
| Others     | Packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 180g/pcs; 44 x 41 x 21.5 cm; 100pcs/carton                                        |                          |                          |                                                                           |                          |                          |
|            | Dimension (LxWxH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 104 x 46 x 30.1 mm                                                                |                          |                          |                                                                           |                          |                          |
|            | Plug and Cable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | See page 3~5; Other type available by customer requested                          |                          |                          |                                                                           |                          |                          |
|            | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 492.9Khrs min. MIL-HDBK-217F(25 ℃ )                                               |                          |                          |                                                                           |                          |                          |
| Note       | 1. Tolerance: includes set up tolerance, line regulation and load regulation.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3.Line regulation is measured from low line to high line at rated load.<br>4.Load regulation is measured from 0% to 100% rated load.<br>5. All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25℃ of ambient temperature.<br>6. De-rating may be needed under low input voltages. Please refer to “Static Characteristic” sections for details.<br>7. The power supply is considered as a component that will be operated in combination with final equipment.Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. |                                                                                   |                          |                          |                                                                           |                          |                          |

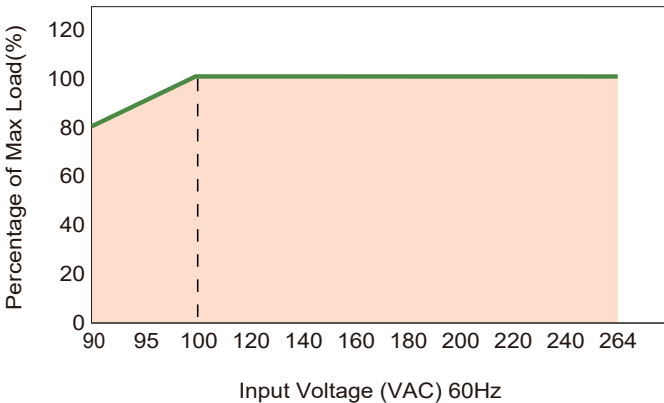
YS25-Class II SERIES  
42W

Feature Curves

1. Derating Curve

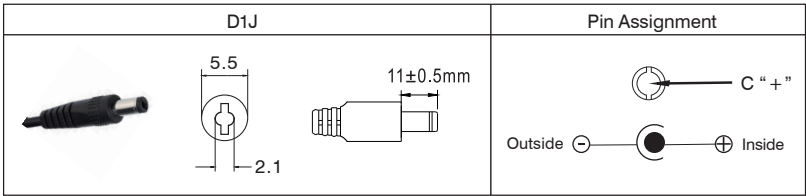


2. Static Characteristics

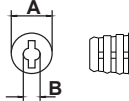
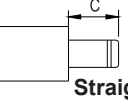


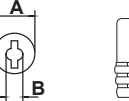
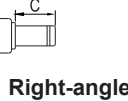
DC Output Plug (Option)

Standard Model : D1J



Optional DC plug:  
(Unit: mm , tolerance: ±0.5mm)

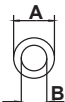
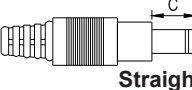
| Tuning Fork Style |  |  |  |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Type No.          | A                                                                                   | B                                                                                   | C                                                                                   |
|                   | OD                                                                                  | ID                                                                                  | L                                                                                   |
| D1I               | 5.5                                                                                 | 2.1                                                                                 | 9.5                                                                                 |
| D1L               | 5.5                                                                                 | 2.5                                                                                 | 9.5                                                                                 |
| D1M               | 5.5                                                                                 | 2.5                                                                                 | 11.0                                                                                |

| Tuning Fork Style |  |  |  |
|-------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Type No.          | A                                                                                     | B                                                                                     | C                                                                                     |
|                   | OD                                                                                    | ID                                                                                    | L                                                                                     |
| D1IR              | 5.5                                                                                   | 2.1                                                                                   | 9.5                                                                                   |
| D1JR              | 5.5                                                                                   | 2.1                                                                                   | 11.0                                                                                  |
| D1LR              | 5.5                                                                                   | 2.5                                                                                   | 9.5                                                                                   |
| D1MR              | 5.5                                                                                   | 2.5                                                                                   | 11.0                                                                                  |

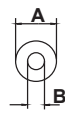
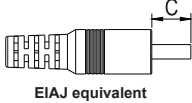
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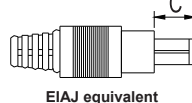
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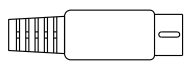
### DC Output Plug (Option)

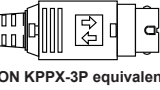
| Barrel Style |  |  |  | Straight |
|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|
| Type No.     | A                                                                                 | B                                                                                 | C                                                                                 |          |
|              | OD                                                                                | ID                                                                                | L                                                                                 |          |
| D2I          | 5.5                                                                               | 2.1                                                                               | 9.5                                                                               |          |
| D2J          | 5.5                                                                               | 2.1                                                                               | 11.0                                                                              |          |
| D2L          | 5.5                                                                               | 2.5                                                                               | 9.5                                                                               |          |
| D2M          | 5.5                                                                               | 2.5                                                                               | 11.0                                                                              |          |

| Barrel Style |  |  |  | Right-angled |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|
| Type No.     | A                                                                                   | B                                                                                   | C                                                                                   |              |
|              | OD                                                                                  | ID                                                                                  | L                                                                                   |              |
| D2IR         | 5.5                                                                                 | 2.1                                                                                 | 9.5                                                                                 |              |
| D2JR         | 5.5                                                                                 | 2.1                                                                                 | 11.0                                                                                |              |
| D2LR         | 5.5                                                                                 | 2.5                                                                                 | 9.5                                                                                 |              |
| D2MR         | 5.5                                                                                 | 2.5                                                                                 | 11.0                                                                                |              |

| Tuning Fork Style |  |  |  | EIAJ equivalent |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|
| Type No.          | A                                                                                   | B                                                                                   | C                                                                                   |                 |
|                   | OD                                                                                  | ID                                                                                  | L                                                                                   |                 |
| D3A               | 2.35                                                                                | 0.7                                                                                 | 11.0                                                                                |                 |
| D3B               | 4.0                                                                                 | 1.7                                                                                 | 11.0                                                                                |                 |
| D3C               | 4.75                                                                                | 1.7                                                                                 | 11.0                                                                                |                 |

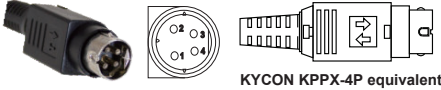
| Center Pin Style |  |  |  | EIAJ equivalent |
|------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|
| Type No.         | A                                                                                     | B                                                                                     | C                                                                                     | D               |
|                  | OD                                                                                    | ID                                                                                    | L                                                                                     | Center Pin      |
| D4A              | 5.5                                                                                   | 3.4                                                                                   | 11.0                                                                                  | 1.0             |
| D4B              | 6.5                                                                                   | 4.4                                                                                   | 11.0                                                                                  | 1.4             |
| D4C              | 7.4                                                                                   | 5.1                                                                                   | 11.0                                                                                  | 0.6             |

| Barrel Style |  |  |  |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Type No.     | Pin Assignment                                                                      |                                                                                     |                                                                                     |
|              | PIN No.                                                                             | Output                                                                              |                                                                                     |
| M1B          | 1                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 2                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 3                                                                                   | +Vo                                                                                 |                                                                                     |
|              | 4                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 5                                                                                   | +Vo                                                                                 |                                                                                     |

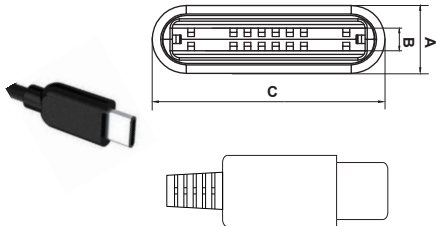
| MIN.Din 3Pin with Lock(male) |  |  |  | KYCON KPPX-3P equivalent |
|------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------|
| Type No.                     | Pin Assignment                                                                        |                                                                                       |                                                                                       |                          |
|                              | PIN No.                                                                               | Output                                                                                |                                                                                       |                          |
| M6B                          | 1                                                                                     | +Vo                                                                                   |                                                                                       |                          |
|                              | 2                                                                                     | -Vo                                                                                   |                                                                                       |                          |
|                              | 3                                                                                     | +Vo                                                                                   |                                                                                       |                          |

YS25-Class II SERIES  
42W

DC Output Plug (Option)

| MIN.Din<br>4Pin with<br>Lock(male) |  |        |
|------------------------------------|-----------------------------------------------------------------------------------|--------|
|                                    | KYCON KPPX-4P equivalent                                                          |        |
| Type No.                           | Pin Assignment                                                                    |        |
|                                    | PIN No.                                                                           | Output |
| M7B                                | 1                                                                                 | +Vo    |
|                                    | 2                                                                                 | -Vo    |
|                                    | 3                                                                                 | -Vo    |
|                                    | 4                                                                                 | +Vo    |

| MIN.Din<br>4Pin with<br>Lock(female) |  |        |
|--------------------------------------|-------------------------------------------------------------------------------------|--------|
|                                      | KYCON KPJX-CM-4S equivalent                                                         |        |
| Type No.                             | Pin Assignment                                                                      |        |
|                                      | PIN No.                                                                             | Output |
| M7BF                                 | 1                                                                                   | +Vo    |
|                                      | 2                                                                                   | -Vo    |
|                                      | 3                                                                                   | -Vo    |
|                                      | 4                                                                                   | +Vo    |

| Type-C   |  |     |      |
|----------|-------------------------------------------------------------------------------------|-----|------|
|          |                                                                                     |     |      |
| Type No. | A                                                                                   | B   | C    |
|          | OD                                                                                  | ID  | L    |
| C1       | 2.4                                                                                 | 1.3 | 8.25 |

| Stripped<br>and<br>tinned<br>leads | <br>Length of Land L1 by request<br>YJ's standard length, L: 30 mm, L1: 5 mm<br>NOTE: The wire color is for reference only,<br>please refer to the actual product |        |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|                                    |                                                                                                                                                                                                                                                        |        |
| Type No.                           | Pin Assignment                                                                                                                                                                                                                                         |        |
|                                    | PIN No.                                                                                                                                                                                                                                                | Output |
| by<br>customer                     | 1                                                                                                                                                                                                                                                      | +Vo    |
|                                    | 2                                                                                                                                                                                                                                                      | -Vo    |