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SLD Light Source Module

Part Number: IPSDS1002-xxxx

1. Configuration



Figure 1 Configuration of IPSDS1002-xxxx SLD light source module

2. Absolute Maximum Ratings

| Parameter | Min. | Max. | Unit |
|----------------------|------|------|------|
| Power Supply Voltage | 4.5 | 5.5 | V |
| Storage Temperature | -40 | +85 | °C |
| Humidity | 10 | 95 | % |

3. Recommended Operational Condition

| Parameter | Min. | Typ. | Max. | Unit |
|--|------|------|------|-------------------|
| Power Supply Voltage | 4.75 | 5.00 | 5.25 | V |
| Ripple/spike noise of Power Supply Voltage | - | 50 | 120 | mV _{p-p} |
| Operating Temperature | 15 | 25 | 50 | °C |
| Operating Humidity | 30 | 60 | 90 | % |

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4. Optical characteristics

| Items | Specifications | | | Unit | Notes |
|----------------------------------|------------------------------------|------|------|------|--|
| | Min. | Typ. | Max. | | |
| Center Wavelength @ -3dB | 1030 | 1040 | 1050 | nm | @ 25°C and CW. Connectors are included. |
| 3dB Optical Bandwidth | 65 | 70 | - | nm | |
| Optical Output Power | 5 | 10 | - | mW | |
| ASE Ripple @ 0.1nm | - | 0.1 | 0.2 | dB | |
| Optical Power Stability (8hr) | - | - | ±0.1 | dB | Stability test of P _{max} after 0.5 hour warm up at 25°C |
| Optical Output Type | FC adaptor or pigtail fiber out | | | - | As shown in Figure 2 of Section 7 in detail |
| Fiber Connector | FC or SC type | | | - | |
| Fiber Type | Corning HI1060 or equivalent | | | - | |
| Fiber Jacket | 900µm loose tube | | | - | |
| Fiber Length | 0.5 | - | - | m | If pigtail fiber out is selected. |

5. Electrical characteristics

| Item | Specifications | | | Units | Notes |
|--------------------------------------|---|------|------|-------|---|
| | Min. | Typ. | Max. | | |
| Power supply current | - | 1.0 | 2.0 | A | Pmax CW optical output |
| Power consumption | - | 5.0 | 10.0 | W | |
| Range of V _{SET} | 0.0 | - | 2.5 | V | |
| Input impedance for V _{SET} | > 20k | | | Ω | |
| VH for TTL input/output | 3.80 | - | - | V | For SLD Enable and Alarm |
| VL for TTL input/output | - | - | 1.02 | V | |
| Optical Power Control | SLD Current Adjustment via V _{SET} as shown in Section 6 in detail | | | - | |
| Connector Type | DB9 Connector, Female | | | - | See section 6 for Pin Allocation in detail |

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6. Pin Assignment Specifications

DB9 Connector Pin Allocation

| Pin # | Function | In/Out | Type | Description |
|-------|------------------|--------|-----------------|---|
| 1 | +5VDC | IN | Analog (5.0V) | Power Supply, $\leq 2A$. |
| 2 | NC | NA | NA | Reserved |
| 3 | SLD Enable | IN | TTL | SLD turn on control. TTL high turns on SLD and TTL low turns off SLD. See Figure 3 in detail. |
| 4 | Alarm | OUT | TTL | TEC operation status. TTL high indicates that TEC failure has activated and TTL low indicates that TEC operation is normal. See Figure 3 in detail. |
| 5 | V _{SET} | IN | Analog (0~2.5V) | Input voltage to set SLD current. The range of 0.0-2.5V for V _{SET} corresponds to 0~I _{max} mA of SLD operation current. |
| 6 | GND | IN | GND | Power supply and signals GND. |
| 7 | NC | NA | NA | Reserved |
| 8 | NC | NA | NA | Reserved |
| 9 | NC | NA | NA | Reserved |

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7. Mechanical Specifications

34. Drawing and dimensions (unit: mm): 100mm(L)×80mm(W)×26mm(H)

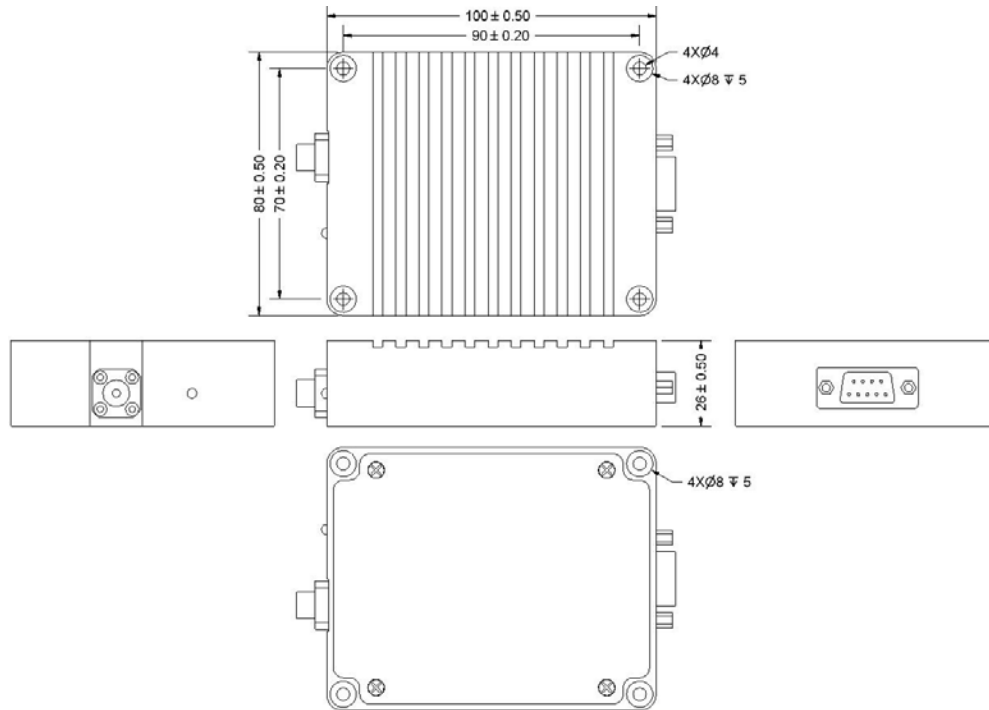


Figure 2 Mechanical drawing of module box (FC/APC connector with FC adaptor)

2. Module case is isolated from any electrical connection.

8. Signals Characteristics



Figure 3 Startup and operational timing of the module

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9. Part Numbering Structure of SLD light source module



Model Number

- 07**: 700~790nm SLD
- 08**: 800~890nm SLD
- 09**: 900~990nm SLD
- 10**: 1010~1090nm SLD
- 13**: 1300~1390nm SLD
- 14**: 1400~1490nm SLD
- 15**: 1500~1590nm SLD

Output Type

- 0: FC Adaptor
- 1: Pigtail fiber

Connector Type

- 0: No Connectors
- 3: FC/APC 4: FC/UPC
- 7: SC/APC 8: SC/UPC

Fiber Type

- 1: 900µm SM Fiber
- 2: 900µm PM Fiber

Case Size

- 1: 100×80×26mm case
- 2: 130×100×26mm case
- 3: 130×115×36mm case

Example: IPSDS0701-1011: 700nm-type SLD light source module in 100×80×26mm case with pigtail fiber output, 900µm SM fiber without connector

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