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# SLD Light Source Module

Part Number: IPSDS0801-××××

## 1. Configuration

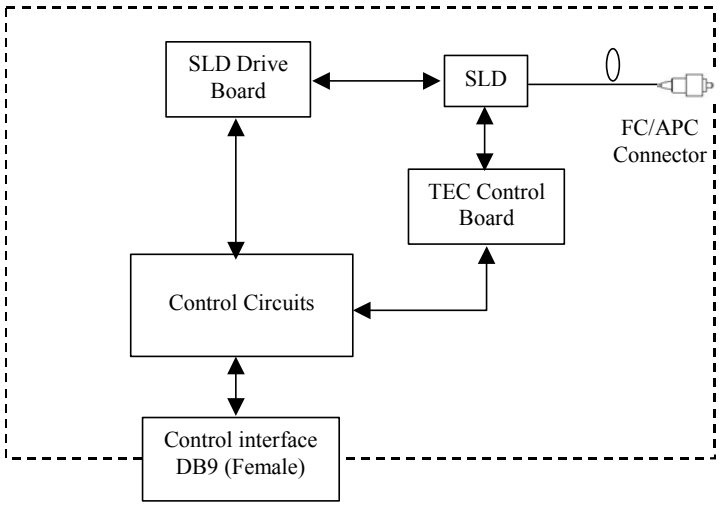


Figure 1 Configuration of IPSDS0801-×××× SLD light source module

## 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 | 805 | 820 | 830 | nm | @ 25°C and CW. Connectors are included. |
| 3dB Optical Bandwidth | - | 15 | - | nm | |
| Optical Output Power | - | 0.3 | - | mW | |
| ASE Ripple @ 0.1nm | - | - | 0.1 | 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 HI780 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, ≤ 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

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

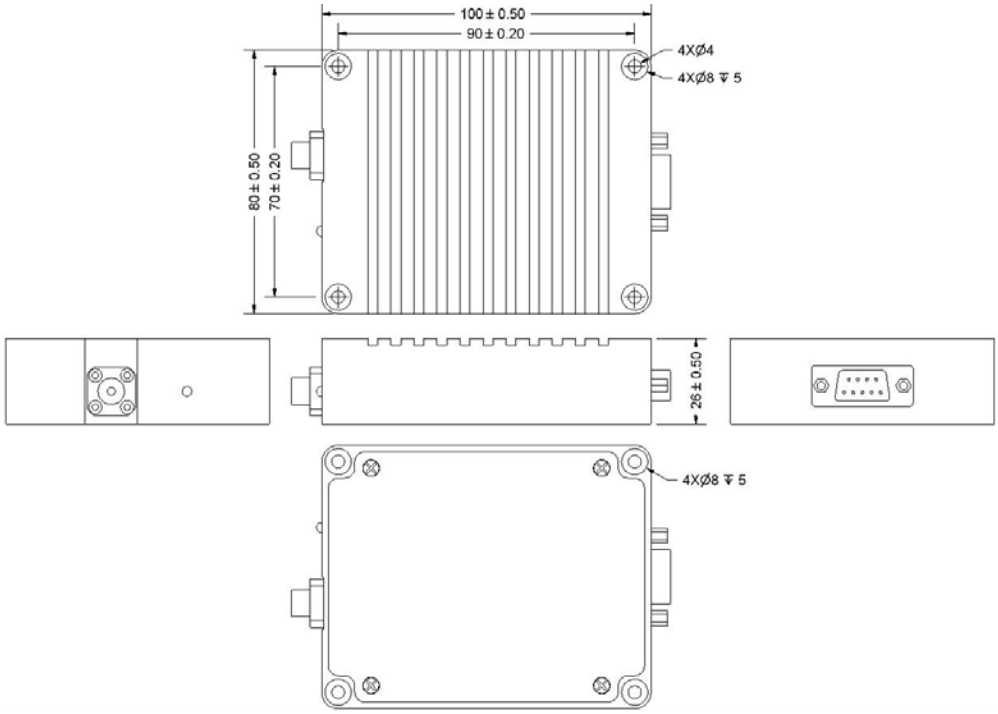


Figure 2 Mechanical drawing of module box (FC/APC connector with FC adaptor)

2. Module case is isolated from any electrical connection.

## 8. Signals Characteristics

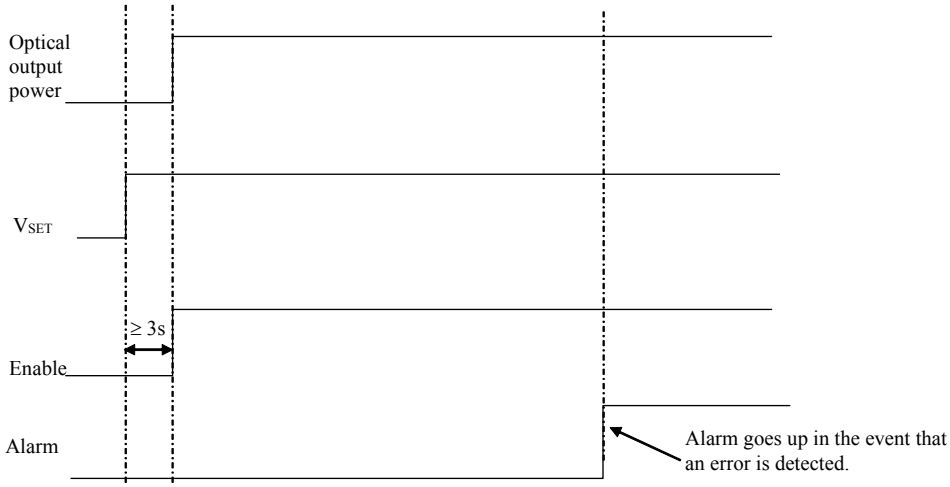


Figure 3 Startup and operational timing of the module

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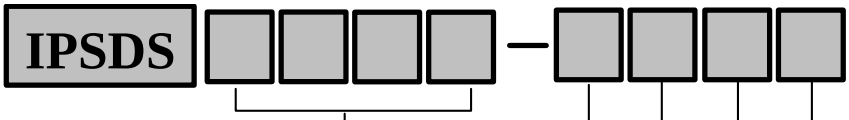
## 9. Part Numbering Structure of SLD light source module




**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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