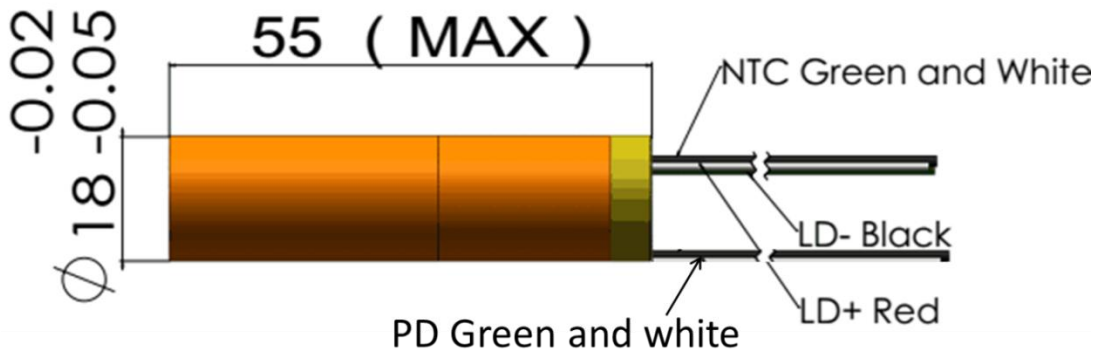


## Y561D050-18x55-40

### Features

- DPSS Laser
- 50mW@561nm
- Fast Rise Time
- High Reliability

### Dimensions (Unit: mm)



### Specifications

| Model Number                            |               | Y561D050-18x55-40       |        |        |
|---|---------------|-------------------------|--------|--------|
| Mechanical Specifications               |               | Min                     | Typ    | Max    |
| Laser Head                              | Diameter (mm) | 17.95                   | -      | 17.98  |
|   | Length (mm)   | -                       | -      | 55     |
|   | Weight (g)    | -                       | -      | 200    |
| Housing Material                        |               | Brass with gold-plating |        |        |
| Optical Specifications                  |               | Min                     | Typ    | Max    |
| Wavelength (nm)                         |               | 559                     | 561    | 563    |
| Output Power (mW) at T°C <sup>(1)</sup> |               | 45                      | 50     | -      |
| Power Stability at T°C <sup>(2)</sup>   |               | -                       | +/- 3% | +/- 5% |
| Output Power Mode                       |               | CW                      |        |        |
| Laser Class                             |               | 3B                      |        |        |

(1) T is optimum operating temperature of laser module

(2) RMS after max. 3 minutes

| <b>Beam Specifications</b>                           |                       | <b>Min</b>   | <b>Typ</b> | <b>Max</b> |
|--|-----------------------|--|------------|------------|
| Beam Divergence (mrad) <sup>(1)</sup>                |                       | -  | 30         | 40         |
| Beam Waist (μm)                                      |                       | -  | 250        | -          |
| Beam Alignment Tolerance                             | Position (Δr, mm)     | -  | -          | 0.5        |
|  | Off-axis Angle (mrad) | -  | 35         | 60         |
| Beam Diameter at Output Window (mm)                  |                       | -  | 0.5        | -          |
| Beam Roundness                                       |                       | -  | 70%        | -          |
| Beam Mode Longitude                                  |                       | Multi  |            |            |
| Beam Mode Transverse                                 |                       | TEM <sub>n0</sub>  |            |            |
| Polarization Ratio (Linear)                          |                       | 100:1  | -          | -          |
| Residual IR  |                       | -  | -          | 3%         |
| <b>Electrical Specifications</b>                     |                       | <b>Min</b>   | <b>Typ</b> | <b>Max</b> |
| Power Type   |                       | APC  |            |            |
| LD Voltage (DC, V)                                   |                       | 1.8  | 2          | 2.3        |
| LD Operating Current (mA) at 2V                      |                       | -  | 2,000      | 2,500      |
| Thermistor Constants                                 |                       | A = 2.231e <sup>-3</sup> B = 4.694e <sup>-5</sup><br>C = 0.884e <sup>-6</sup>        |            |            |
| Thermistor Resistance                                |                       | 6.6KΩ@35°C    8.2KΩ@30°C<br>10.0KΩ@25°C    12.3KΩ@20°C<br>16.4KΩ@15°C    18.5KΩ@10°C |            |            |
| Power Consumption (W) at T°C <sup>(3)</sup>          |                       | -  | 4          | 5.75       |
| PD Feedback Current (μA)                             |                       | -  | 380        | 500        |
| Housing Isolation                                    |                       | No   |            |            |
| ESD protection                                       |                       | No   |            |            |
| Wire Length (mm) <sup>(2)</sup>                      |                       | 200 (+/-50)  |            |            |
| Wire Type <sup>(2)</sup>                             |                       | 20AWG / 28AWG  |            |            |
| <b>Reliability</b>                                   |                       | <b>Min</b>   | <b>Typ</b> | <b>Max</b> |
| Operating Case Temperature Range (°C) <sup>(3)</sup> |                       | T-1  | T          | T+1        |
| Rise Time (s) at 2.5A                                |                       | -  | 0.05       | 0.2        |
| Storage Temperature (°C)                             |                       | 0  | -          | 40         |
| Environmental Humidity (RH, %)                       |                       | 5  | -          | 85         |
| Lifetime (hours) (MTTF at 25°C)                      |                       | 5,000  | -          | -          |
| RoHS Compliance Declaration                          |                       | Yes  |            |            |

(1) Full Angle (1/e<sup>2</sup>)

(2) 20AWG for LD wires. 28AWG for NTC wires and PD wires

(3) T is optimum operating temperature of laser module