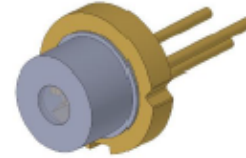


## 905nm 25W Pulsed Laser Diodes

### Model: OPT905TO25-R



#### Features

- 3stack PLD
- Laser wavelength: 905 nm
- Peak output power:  $\geq 25$  W
- Optical aperture size:  $75 \mu\text{m} \times 10 \mu\text{m}$

#### Applications

- LiDAR
- Laser ranging
- Safety monitoring
- Scientific research test

#### Optical Characteristics at $t_{RT} = 25^\circ\text{C}$

|  | Min. | Typ. | Max. | Units                |
|--|------|------|------|----------------------|
| Wavelength of peak radiant intensity $\lambda_m$           | 895  | 905  | 915  | nm                   |
| Spectral bandwidth $\Delta\lambda$ at 50% intensity points | 5    | 7    | 8    | nm                   |
| Wavelength temperature coefficient                         |      | 0.28 |      | nm/ $^\circ\text{C}$ |
| Beam spread (50% peak intensity)                           |      |      |      |                      |
| Parallel to junction plane //                              | 12   | 17   | 20   | Degrees              |
| Perpendicular to junction plane $\perp$                    | 28   | 30   | 32   | Degrees              |

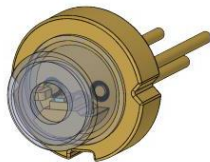
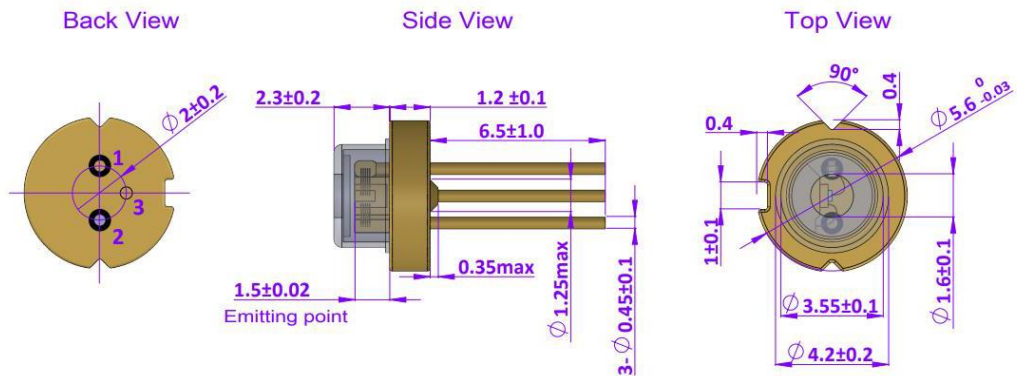
#### Optical Characteristics at $t_{RT} = 25^\circ\text{C}$ , $t_w = 100$ ns, $D = 0.01\%$ , $I_F = 20$ A

| Parameter                |                | Units         |
|--------------------------|----------------|---------------|
| Number of elements       | $1 \times 3$   |               |
| Peak output power (typ.) | 25             | W             |
| Emitting area            | $75 \times 10$ | $\mu\text{m}$ |
| Threshold, $I_{th}$ typ. | 500            | mA            |
| Forward voltage at $I_F$ | 8.4            | V             |

### Absolute Maximum Ratings

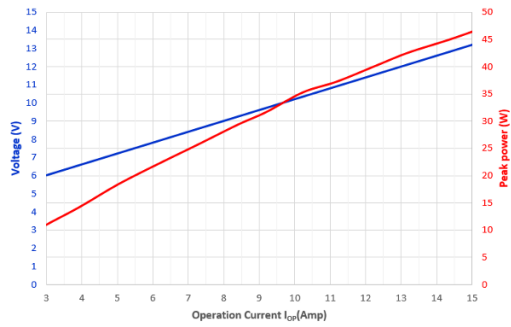
| Maximum ratings      | Limiting values |
|----------------------|-----------------|
| Max. current         | 10A             |
| Peak reverse voltage | 20V             |
| Pulse duration       | 100ns           |
| Duty factor          | 0.1%            |
| Temperature          |                 |
| - Storage            | -40°C to +105°C |
| - Operating          | -40°C to +85°C  |
| Lead soldering       |                 |
| - 10 seconds max at  | 260°C           |

### Package Drawings

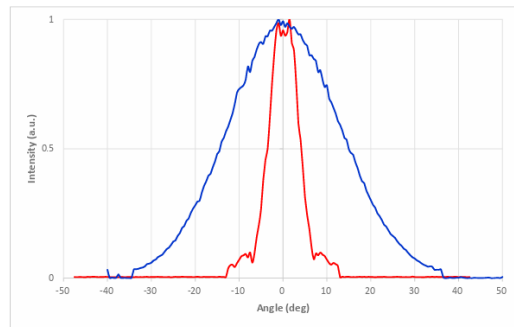


Pin definition: 1. Anode  
2. NC  
3. Cathode

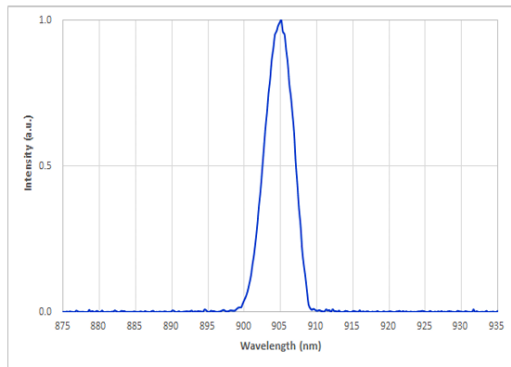
## Power-Voltage-Current Characteristics



## Far Field Pattern Characteristics



## Spectral Characteristics



## Near Field Pattern (NFP)

