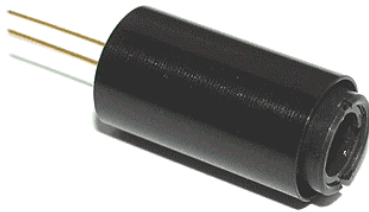
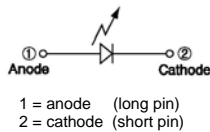


RC-LED-650-02

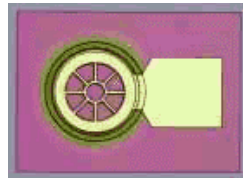
TECHNICAL DATA

RESONANT CAVITY LED MODULE

Resonant Cavity LED with adjustable glass collimator
 Peak Wavelength: typ. 650 nm
 Optical Output Power: typ. 185 μ W @ 20 mA
 Exit Beam Diameter: 4.9 mm
 Package: black anodized aluminium header
 Size: 10 mm Diameter x 18 mm Length



black anodized housing with collimating optic



RC-LED chip structure



collimated far field beam pattern
 target distance = 7.2 m
 dot diameter = 78 mm

Absolute Maximum Ratings (T_c = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|----------------------------------|------------------|-------------|------|
| DC Forward Current | I _F | 30 | mA |
| Reverse Voltage | V _R | 5 | V |
| Lead Solder Temperature (10 sec) | T _S | 260 | °C |
| Operating Case Temperature | T _{OP} | -20 .. +70 | °C |
| Storage Temperature | T _{STG} | -40 .. +100 | °C |

Optical-Electrical Characteristics (T_c = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|----------------------|--------------------------|------------------------|-----|------|-----|---------|
| Optical Power | P _O | I _F = 20 mA | 170 | 185 | 200 | μ W |
| Peak Wavelength | λ_P | I _F = 20 mA | 640 | 650 | 660 | nm |
| Beam Divergence FWHM | θ | I _F = 20 mA | 5.0 | 5.5 | 6.0 | mrad |
| Forward Voltage | V _F | I _F = 20 mA | | 2.0 | 2.2 | V |
| Reverse Current | I _R | V _R = 5 V | | | 10 | μ A |
| Spectrum Half Width | $\Delta\lambda$ | I _F = 20 mA | | 7 | | nm |
| Rise Time (10 – 90%) | t _r | I _F = 20 mA | | 3 | | ns |
| Fall Time (10 – 90%) | t _f | I _F = 20 mA | | 3 | | ns |
| Wavelength Shift | $\Delta\lambda/\Delta T$ | I _F = 20 mA | | 0.07 | | nm/K |
| Power Drift | $\Delta P_O/\Delta T$ | I _F = 20 mA | | -0.6 | | %/K |

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