

FEATURES

- High output power
- High reliability
- Narrow emission angle

DESCRIPTION

The **PDI-E805** is an 880 nm high power GaAlAs infrared emitter packaged in a TO-46 metal header with a clear plastic lens cap.

APPLICATIONS

- Photoelectric switches
- Infrared sources
- Optical readers

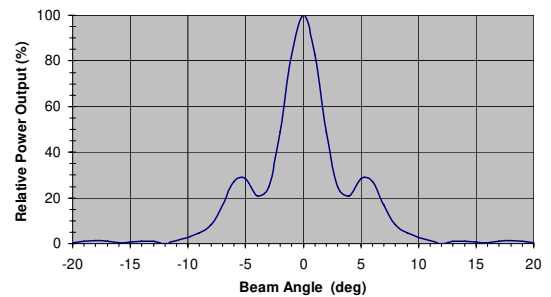


ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

| SYMBOL | PARAMETER | MIN | MAX | UNITS |
|-----------|----------------------------|-----|------|-------|
| P_d | Power Dissipation | | 160 | mW |
| I_f | Continuous Forward Current | | 100 | mA |
| I_p | Peak Forward Current | | 3.0 | A |
| V_r | Reverse Voltage | | 5 | V |
| T_{STG} | Storage Temperature | -20 | +90 | °C |
| T_O | Operating Temperature | -20 | +90 | °C |
| T_S | Soldering Temperature* | | +240 | °C |

* 1/16 inch from case for 3 seconds max.

RADIATION PATTERN



ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|-----------------|---------------------------------|--------------------------|-----|------|-----|---------|
| P_o | Output Power | $I_f = 100$ mA | 8.5 | 10 | | mW |
| V_f | Forward Voltage | $I_f = 100$ mA | | 1.5 | 1.9 | V |
| V_r | Reverse Breakdown Voltage | $I_f = 10$ μ A | 5 | 30 | | V |
| λ_p | Peak Wavelength | $I_f = 20$ mA | 865 | 880 | 895 | nm |
| $\Delta\lambda$ | Spectral Bandwidth @ 50% (FWHM) | $I_f = 20$ mA | | 65 | | nm |
| C_t | Terminal Capacitance | $V_r = 0$ V, $f = 1$ MHz | | 15 | | pF |
| t_r | Rise Time | $I_f = 20$ mA | | 0.75 | | μ S |
| t_f | Fall Time | $I_f = 20$ mA | | 0.40 | | μ S |

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