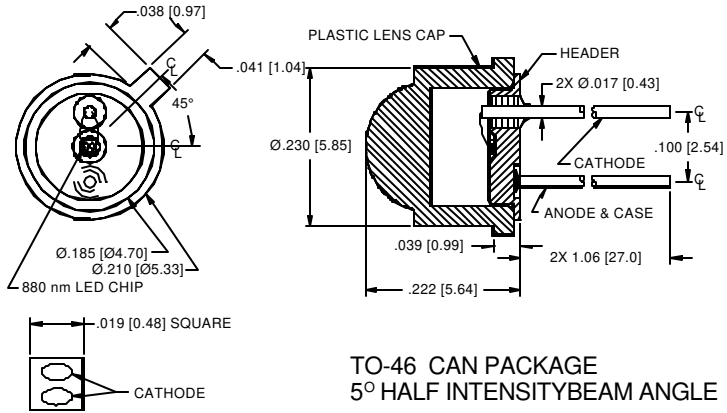


PHOTONIC DETECTORS INC.

High-Power & Current GaAlAs Infrared Emitters Peak Wavelength, 880 nm, Type PDI-E815



PACKAGE DIMENSIONS inch (mm)



TO-46 CAN PACKAGE
5° HALF INTENSITY BEAM ANGLE

FEATURES

- Dual cathode
- High current
- Collimated high emission angle

DESCRIPTION: The PDI-E815 infrared emitting diode uses dual cathode, high current liquid phase epitaxially grown GaAlAs. Optimized for high power, high current at 880 nm. Packaged in a TO-46 can with a clear plastic lens cap.

APPLICATIONS

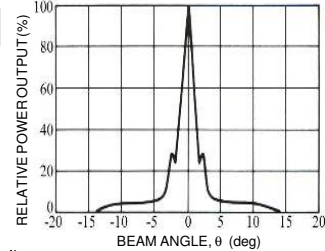
- Optical encoders
- Infrared sources
- Optical readers

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

| SYMBOL | PARAMETER | MIN | MAX | UNITS |
|-----------------|---|-----|------|-------|
| Pd | Power Dissipation | | 360 | mW |
| I _{FP} | Continuous Forward Current | | 180 | mA |
| I _{FP} | Peak Forward Current (100µs pulse, 10pps) | | 3.0 | A |
| V _R | Reverse voltage | | 3.0 | V |
| To & Ts | Storage & Operating Temperature | -65 | +125 | °C |
| TS | Soldering Temperature* | | +260 | °C |

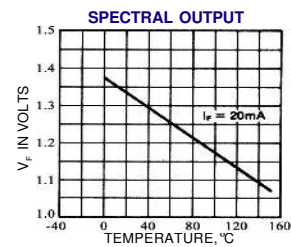
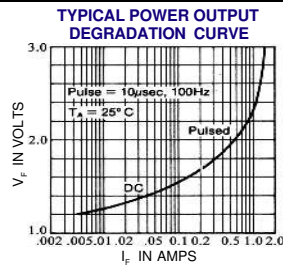
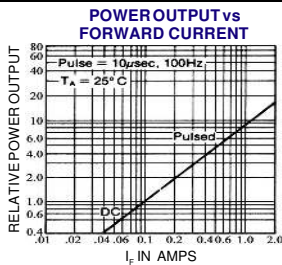
*1/16 inch from case for 3 secs max

TYPICAL RADIATION PATTERN



ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------------|--------------------|-------------------------|-----|-----|-----|-------|
| P _O | Output Power | I _F = 100 mA | 7.0 | 15 | | mW |
| V _F | Forward Voltage | I _F = 100 mA | | 1.5 | 1.9 | V |
| I _R | Reverse Current | V _R = -3.0 V | | | 10 | mA |
| λ _P | Peak Wavelength | I _F = 50 mA | 865 | 880 | 895 | nm |
| Δλ | Spectral Halfwidth | I _F = 50 mA | | 80 | | nm |
| R _d | Dynamic Resistance | I _F = 100 mA | | 1.2 | | Ohm |
| t _r | Rise Time | I _F = 100 mA | | 0.6 | | µS |
| t _f | Fall Time | I _F = 100 mA | | 0.5 | | mS |



Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. Optical power and radiant intensity measured using uncapped dimpled TO-46 into integrating sphere.