PHOTONIC <u>DETECTORS I</u>NC<u>.</u>

High-Power & Current GaAs Infrared Emitters Peak Wavelength 940 nm, Type PDI-E911



PACKAGE DIMENSIONS inch (mm) INDUSTRY EQUIVALENTS TEMT55F(A-D) .170 [4.3] .132 [3.4] .045 [1.1] .030 [0.8] WINDOW CAP .015 [0.38] MAX (WELDED) HEADER .047 [1.2] .035 [0.9] 2X Ø.019 [0.5] 45 ¢ .188 .100 [2.54] Ø.178 [4.5 CATHODE 1ç ų F ANODE & CASE .028 [0.7] MAX Ø.215 [5.5] Ø.207 [5.3] 2X 1.000 [25.4] 940 nm LED CHIP .019 [0.48] SQ **TO-46 HERMETIC CAN PACKAGE** CATHODE 80° HALF INTENSITY BEAM ANGLE

FEATURES

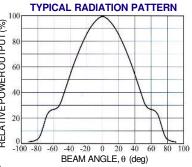
- Dual cathode
- High current
- **DESCRIPTION:** The **PDI-E911** infrared emitting diode uses dual cathode, high current reliability liquid phase epitaxially grown GaAs. Optimized for high
- power, high current at 940 nm. Packaged in a TO-46
- Medium- high emission angle can with a flat glass window cap.

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

RELATIVE POWER OUTPUT (%) SYMBOL PARAMETER MIN MAX UNITS Pd Power Dissipation 360 mW Continuous Forward Current 180 mΑ $|_{\mathbb{P}}$ Peak Forward Current (100µs pulse,10pps 3.0 A $|_{\mathbb{P}}$ V_R Reverse voltage 3.0 ٧ To & Ts Storage & Operating Temperature -65 +125 °C Soldering Temperature* °C TS +260*1/16 inch from case for 3 secs max

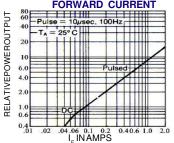
APPLICATIONS

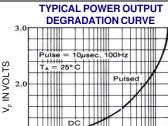
- Photoelectric switches
- Reflective switches
- Smoke detectors

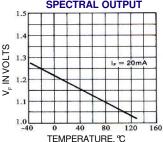


ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Po	Output Power	l⊧ = 100 mA	1.0	5.0		mW
VF	Forward Voltage	l⊧ = 100 mA		1.35	1.75	V
R	Reverse Current	$V_r = -3.0 V$			10	μLA
λp	Peak Wavelength	l⊧ = 50 mA	925	940	955	nm
${}^{\wedge\lambda}$	Spectral Halfwidth	l⊧ = 50 mA		50		nm
Rd	Dynamic Resistance	I _F = 100 mA		0.6		Ohms
tr	Rise Time	l⊧ = 100 mA		1.1		μS
tr	Fall Time	l⊧ = 100 mA		1.5		μS
POWER OUTPUT vs FORWARD CURRENT		TYPICAL POWER OUTPUT DEGRADATION CURVE			SPECTR	AL OUTPUT







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. [FORMNO.100-PDI-E911 REVC]

.05 0.1 0.2

I_IN AMPS

0.5 1.0 2.0