

DESCRIPTION

The **PDB-C160SM** is a red enhanced PIN silicon photodiode ideal for high speed photoconductive applications packaged in a surface mount package.

FEATURES

- Surface Mount
- Photoconductive
- High Speed
- Low cost

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Photointerrupters
- Industrial Electronics
- IR Remote Control
- Control & Drive Circuits



ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS	
Reverse Voltage	-	32	V	$T_a = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-40	+100	$^\circ\text{C}$	-
Operating Temperature	-40	to +100	$^\circ\text{C}$	-
Soldering Temperature*	-	+260	$^\circ\text{C}$	-

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

OPTO-ELECTRICAL PARAMETERS

T_a = 25°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	H= 100 fc, 2856 K	-	80	95	μA
Dark Current	V _R = 10 V	-	2	30	nA
Shunt Resistance	V _R = 10 mV	-	250	-	MW
Junction Capacitance	V _R =0V; f = 1 MHz	-	72	-	pF
Spectral Application Range	Spot Scan	400	-	1100	nm
Peak Wave Length	λ = 850nm	-	.62	-	A/W
Noise Equivalent Power	V _R =10V@λ= Peak	-	4.1x10 ⁻¹⁴	-	W/√Hz
Response Time**	RL = 50Ω, V _R = 5V, λ = 850nm,	-	20	-	nS

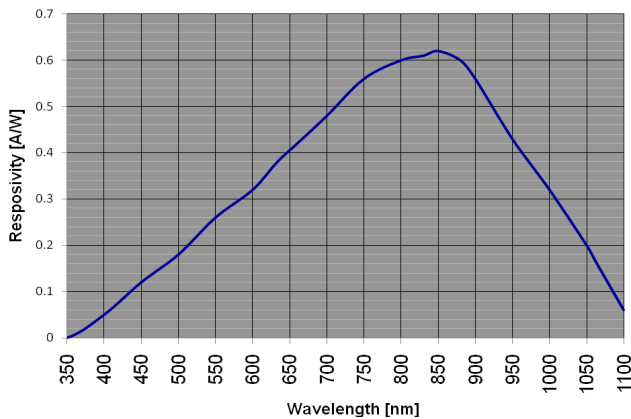
**Response time of 10% to 90% is specified at 850nm wavelength light.

SOLDERING

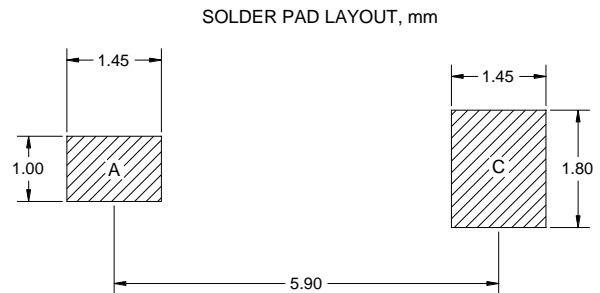
	RECOMMENDATION	
Wave	Not Advised	
IR Oven Reflow	Recommended	See reflow profile.
Forced Convection Reflow	Recommended	See reflow profile.
Convection Reflow	Recommended	See reflow profile.
Vapor Phase Reflow	Recommended	See reflow profile.
Manual	Allowed	260°C for 3 seconds max.
Moisture Sensitivity Level	4	J-STD-033

TYPICAL PERFORMANCE

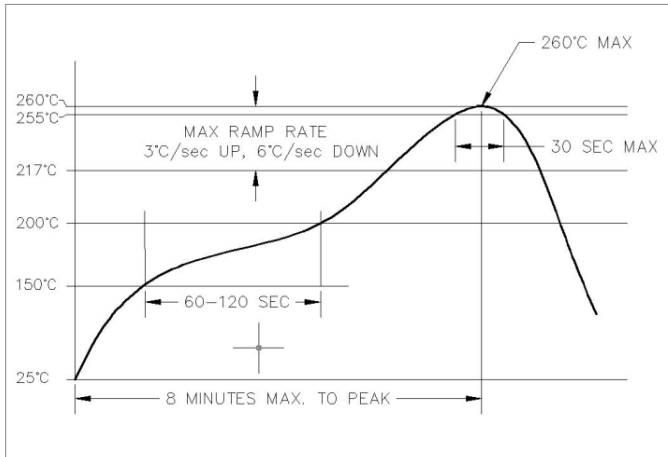
SPECTRAL RESPONSE



SOLDER PAD LAYOUT



REFLOW PROFILE



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