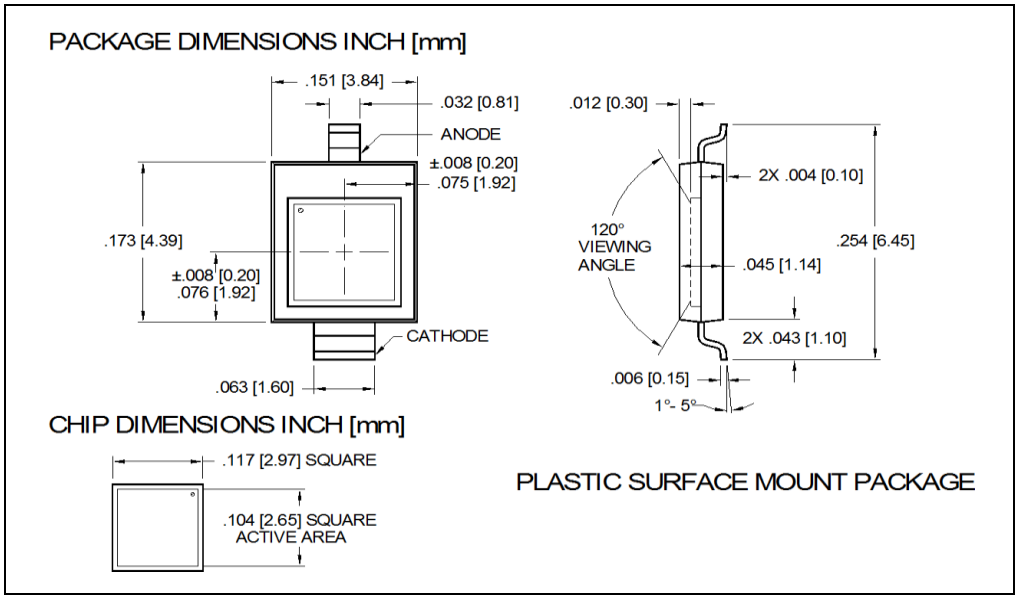
Photodiode in Plastic Surface Mount Package

PDB-C160SM

WWW.LUNAINC.COM **Precision – Control – Results**



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

RoHS

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	32	V	T_a = 25°C UNLESS OTHERWISE NOTED
Storage Temperature	-40	-	+100	°C	-
Operating Temperature	-40	to	+100	°C	-
Soldering Temperature*	-	-	+260	°C	-

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

REV 04-20-17

Luna Optoelectronics, 1240 Avenida Acaso, Camarillo CA 93012 • Phone (805) 987-0146 • Fax (805) 484-9935

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	-	$4.1x10^{-14}$	-	$W/\sqrt{Hz}$
Response Time**	RL = 50Ω, V_R = 5V, λ = 850nm,	-	20	-	nS

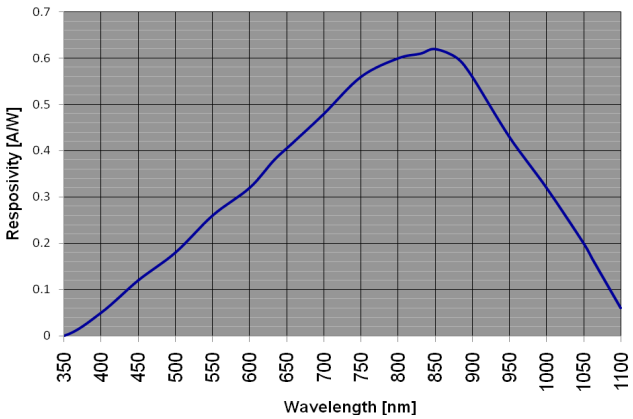
**Response time of 10% to 90% is specified at 850nm wavelength light.

SOLDERING

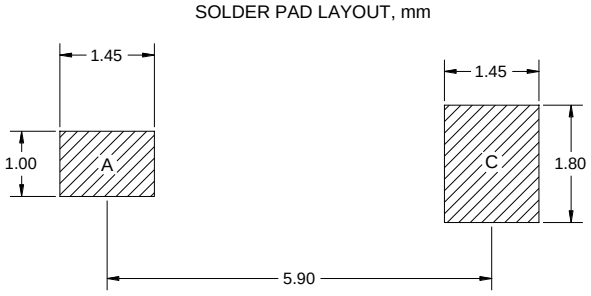
	RECOMMENDATION	
Wave	Not Advised	
IR Oven Reflow	Recommended	See reflow profile.
Forced Convection Reflow	Recommended	See reflow profile.
Convection Reflow	Recommended	See reflow profile.
Vapor Phase Reflow	Recommended	See reflow profile.
Manual	Allowed	260°C for 3 seconds max.
Moisture Sensitivity Level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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE



SOLDER PAD LAYOUT



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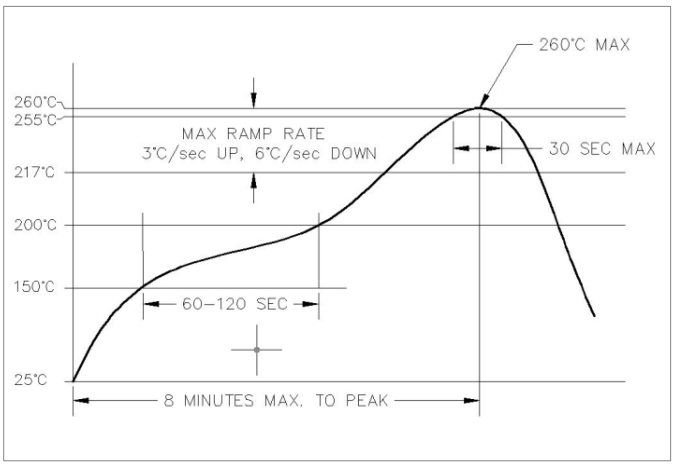
REFLOW PROFILE



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