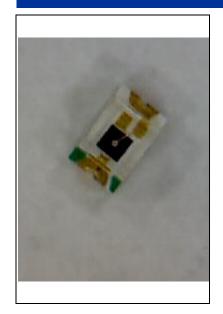
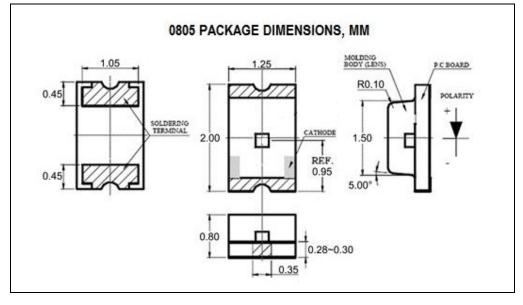


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## **Precision – Control – Results**





#### **DESCRIPTION**

The **SD019-141-411 IR920** is an IR enhanced 0.18mm<sup>2</sup> active area silicon photodiode with an integrated bandpass filter, assembled in a 0805 SMT package.

### **FEATURES**

- Improved sensitivity in NIR area
- Small Footprint
- Low Capacitance
- High Speed

### **RELIABILITY**

This API high-reliability detector is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test.

Contact API for recommendations on specific test conditions and procedures.

### **APPLICATIONS**

- Industrial Sensors
- Light Management
- Handheld Devices

### **ABSOLUTE MAXIMUM RATINGS**

PARAMETER	MIN	MAX	UNITS
Reverse Voltage	-	50	V
Operating Temperature	-40	+105	°C
Storage Temperature	-50	+125	°C
Soldering Temperature*	-	+260	°C

 $T_a = 23$ °C non condensing see recommended reflow profile

# Surface-Mount Photodiode Assembly

SD019-141-411-IR920

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# **Precision – Control – Results**

### **OPTO-ELECTRICAL PARAMETERS**

 $T_a = 23$ °C unless noted otherwise

CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Forward Voltage	I <sub>f</sub> =10 mA	0.5	0.8	1.3	V
Breakdown Voltage	I <sub>R</sub> = 100 μA	50	-	-	V
Shunt Resistance	V <sub>bias</sub> = 10 mV	-	2	-	GΩ
Dark Current	V <sub>R</sub> = 10 V	-	20	500	pA
Junction Capacitance	$V_R = 5V$ ; $f = 1000 \text{ kHz}$	-	6.0	-	pF
Rise Time @ 920 nm	$V_R = 3V; R_i = 1000\Omega$	-	-	1.0	uS
Responsivity (-IR)	$V_R = 0V; \lambda = 920 \text{ nm}$	-	0.5	-	A/W

# **TYPICAL PERFORMANCE**

### **SPECTRAL RESPONSE**

