

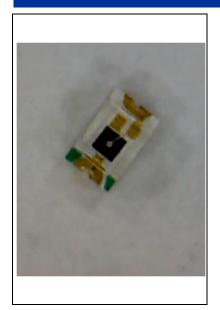
Surface-Mount Filtered Photodiode Assembly

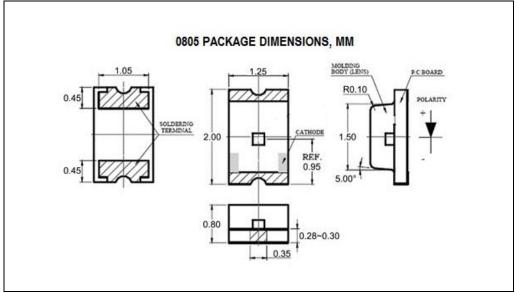
SD 019-141-411-R

-G

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Precision - Control - Results





DESCRIPTION

The **SD019-141-411** is a is a silicon PIN 0.18mm² active area photodiode assembled in a 0805 package with an integrated bandpass filter. Three standard wavelength ranges are available

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.

FEATURES

- Small Footprint
- Low Capacitance
- High Speed

APPLICATIONS

- Industrial Sensors
- Light Management
- Handheld Devices

ABSOLUTE MAXIMUM RATINGS

T_a = 25°C UNLESS OTHERWISE NOTED

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

PART NUMBER	BAND PASS	RANGE [nm]
SD019-141-411 - R	Red	625 – 655
SD019-141-411 - G	Green	510 – 540
SD019-141-411 - B	Blue	435 – 465

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OPTO-ELECTRICAL PARAMETERS			$T_a = 23^{\circ}$ C unless noted otherwise			
CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS	
Forward Voltage	I _f =10 mA	0.5	0.8	1.3	V	
Responsivity (-R)	$V_R = 0V; \lambda = 450 \text{ nm}$		0.06	-	A/W	
Responsivity (-G)	$V_R = 0V; \lambda = 550 \text{ nm}$		0.12	-	A/W	
Responsivity (-B)	$V_R = 0V; \lambda = 625 \text{ nm}$	-	0.05	-	A/W	
Breakdown Voltage	$I_R = 100 \mu A$	50.0	-	-	V	
Shunt Resistance	V _{bias} = 10 mV		2.0	-	GΩ	
Dark Current	V _R = 10 V		-	0.5	nA	
Junction Capacitance	$V_R = 5V$; $f = 1000 \text{ kHz}$	-	6.0	-	pF	
Rise Time	$V_R = 3V; R_i = 1000\Omega$	-	10.0	-	nS	

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

