



DESCRIPTION

The **SD019-141-411 IR920** is an IR enhanced 0.18mm² 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

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.

$T_a = 23^\circ\text{C}$ unless noted otherwise

OPTO-ELECTRICAL PARAMETERS

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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

