

## Absolute Maximum Ratings

For implementations where case to ambient thermal resistance is  $\leq 50$  °C /W

Parameter	Symbol	Min.	Max.	Units
Storage Temperature	$T_S$	-40	85	°C
Operating Temperature	$T_A$	-40	85	°C
Supply Voltage	$V_{CC}$	0	6.0	V

## Recommended Operating Conditions

Parameter	Symbol	Min.	Max.	Units
Supply Voltage	$V_{CC}$	2.4	5.5	V

## Electrical & Optical Specifications (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Output Current (I)[note4]	$I_{OUT1}$	3	19	31	uA	$V_{CC}=3.0V$ , Lux=10 [Note 2]
Output Current (II)[note4]	$I_{OUT2}$	90	230	370	uA	$V_{CC}=3.0V$ , Lux=100 [Note 2]
Output Current (III)[note4]	$I_{OUT3}$	-	276	-	uA	$V_{CC}=3.0V$ , Lux=100 [Note 1]
Dark Current	$I_{DARK}$	-	-	0.5	uA	$V_{CC}=5.0V$ , Lux=0
Light Current Ratio	$I_{OUT3}/I_{OUT2}$	-	1.2	-	-	
Saturation Output Voltage	$V_O$	2.2	2.32	-	V	$V_{CC}=3.0V$ , Lux=100, Rload=1M
Peak Sensitivity Wavelength		-	620	-	nm	
Settling Time with pulsed Vcc	Tset		3.5		ms	$V_{CC}$ pulse = 0V to 3V, Rload=1k $\Omega$ , Lux=100 [Note 3]
Propagation Delay time	Td	-	600	-	us	$V_{CC}=3.0V$ , Lux=100, Rload=1k $\Omega$ [Note 3]
Storage Delay time	Ts	-	200	-	us	$V_{CC}=3.0V$ , Lux=100, Rload=1k $\Omega$ [Note 3]
Rise Time	Tr	-	0.95		ms	$V_{CC}=3.0V$ , Lux=100, Rload=1k $\Omega$ [Note 3]
Fall Time	Tf	-	0.8		ms	$V_{CC}=3.0V$ , Lux=100, Rload=1k $\Omega$ [Note 3]

Note:

1. Illuminance by Incandescent lamp
2. Fluorescent light is used as light source. White LED is substituted in mass production.
3. White LED is used as light source.
4. Other binning options are available. Please contact your Avago Technologies representative for information on current available bins

# APDS-9004 Performance Charts

