

Color sensor

Si photodiode

OPI20TMF-3C2

RGB color sensor



Description

The OPI20TMF-3C2 is device as Red, Green and Blue of optical filter is applied photo diode in plastic package. It can get fast response output of high-sensitivity. These devices are ideal for applications such as colorimeters, display color correction, and selectively ambient light detection or rejection.

Features

- Integral Color Filter in Red, Green and Blue
- High sensitivity
- Small COB package (4mm × 5mm)

Applications

- Color detection
- Color adjustment for LCD projector
- White balance adjustment
- Light source color temperature detection

Absolute Maximum Ratings (Ta= 25°C)

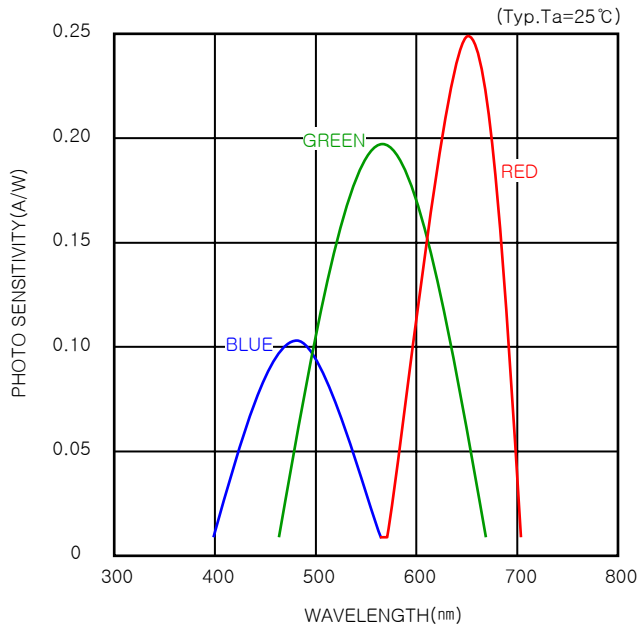
Parameter	Symbol	Ratings	Unit
Reverse voltage	V_R	10	V
Operating temperature	T_{opr}	-20 ~ 85	°C
Storage Temperature	T_{stg}	-30 ~ 100	°C

Electrical and optical characteristics (Ta= 25°C)

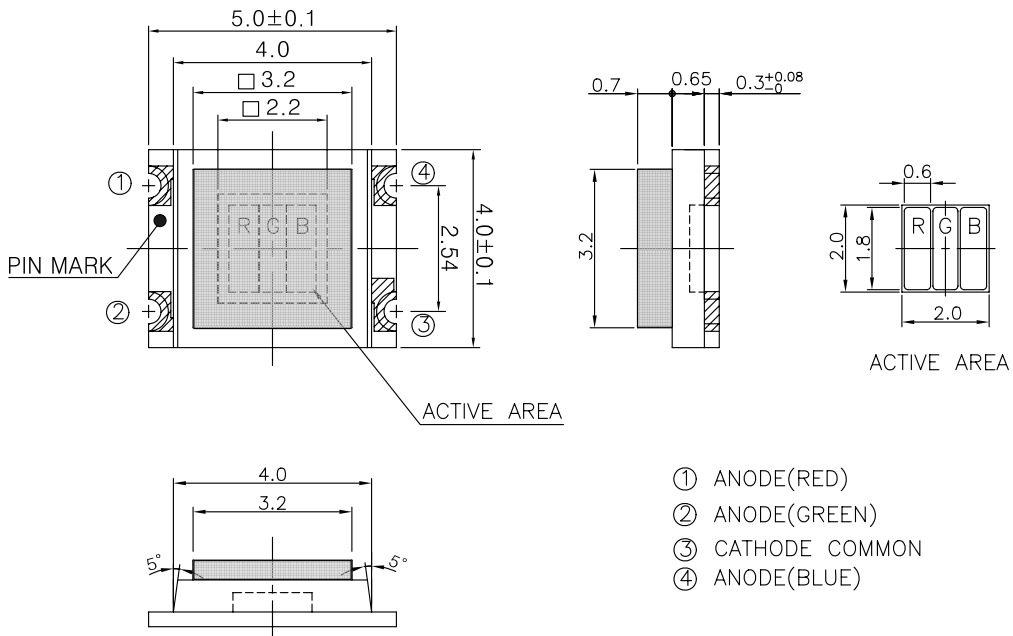
Parameters	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Dark current	I_D	$V_R=10V$	-	15	100	pA	
Forward voltage	V_F	$I_F=100mA$	-	1.0	1.2	V	
Capacitance	C_T	$F = 1MHz$	-	40	80	pF	
Rise time	t_r	$V_R=5V, R_L=1k\Omega$	-	5	-	μs	
Photo sensitivity	Red	$\lambda = \lambda_P$	-	0.25	-	A/W	
	Green		-	0.19	-		
	Blue		-	0.11	-		
Spectral Response range	Red	λ	-	570	-	nm	
	Green		-	470	-		670
	Blue		-	400	-		560
Peak sensitivity wavelength	Red	λ_P	-	655	-	nm	
	Green		-	560	-		
	Blue		-	480	-		

Characteristic graphs

[Spectral response]



Dimensional outline (unit:mm)



General tolerance (± 0.1)