TDK Visible Radiant Optical Sensor is the photo-IC which uses an amorphous silicone semiconductor technology. It is the most suitable for Brightness Adjustment, Control of the Lighting systems. BCS2015A1 has current-amplifire in it. BCS2015A1 is for surface mounthing.

Features

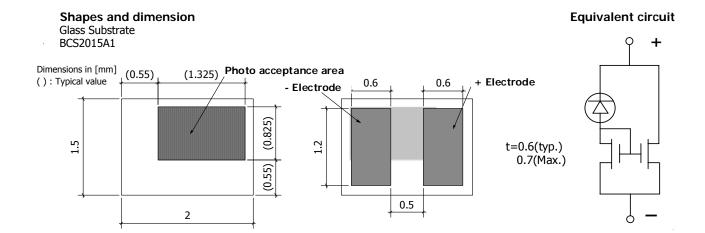
- Highly receptive to visible light but not receptive to infrared light (close to Human eye visibility).
- Accurate illumination measurement can be taken without the use of an infrared filter.

(Phototransistors and photodiodes that use crystal- silicon semiconductors typically require this filtering.)

- High output (Built-in current amplifire)
- Surface mounting can be used in lead- free reflow soldering.
- Lead- free, Cadmium-free

Application

- Brightness control for LCD, EL and CRT
- Brightness control for Keypads (e. g. Mobile Phones)
- Positioning scanline for Rear Projecton TV
- Exposure adjust for Compact Camera
- Sub exposure adjust for Digital Camera



Electrical Characterisic Temperature= 25deg.C Item Value Units Min. Max. Тур. Output current 100Lux*1 Vop=5V 6.0 8.0 10.0 μΑ Operation voltage (Vop) 100Lux*1 V 1.2 5.0 Dark current nΑ 10 Vop=5V

*Initial value

Absolute Maximum Ratings		Temperature= 25d	leg.C
Item	Value		
	Units		
Operation voltage	V	8	
Reverse voltage	V	-1	
Output current	mA	1	

Optical Characteristic		Temperature= 250	deg.C
Item		Value	
	Units]	
Spectral sensivty area	nm	350 to 750	
Peak of sensivity	nm	580±20	

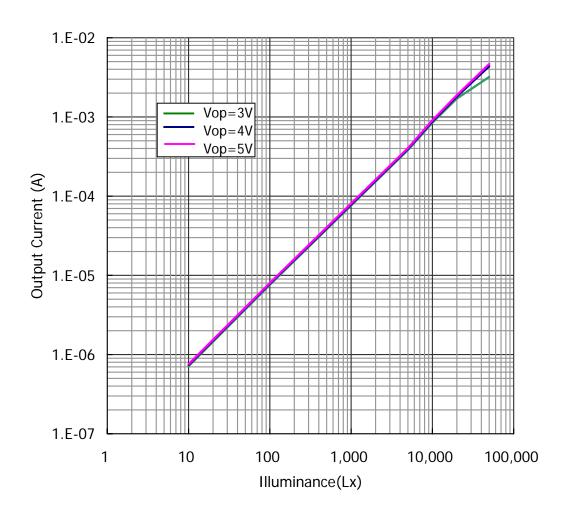
Others

Item	Value		
	Units		
Operating temperature	deg. C	-20 to 85	
Keep and transfer temperature	deg. C	-40 to 85	
Dimensions	mm	2.0×1.5×0.6t	
Weight	g	0.004	

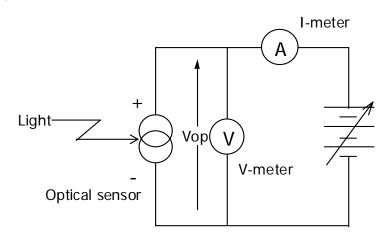
*1 White Fluor Light (color temperature=4200K)



Output characteristic(typical):BCS2015A1

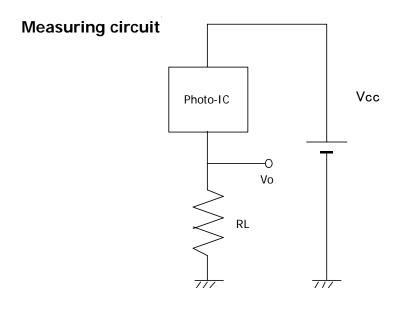


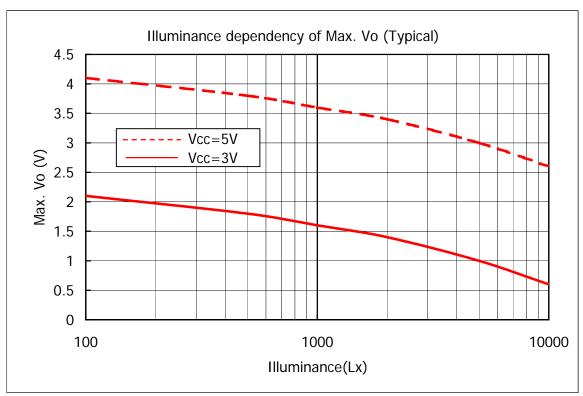
Measuring circuit diagram



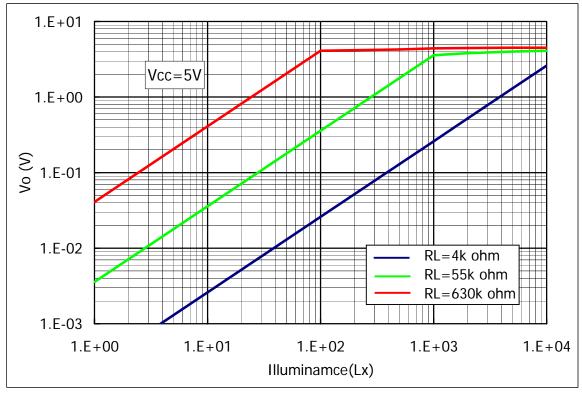


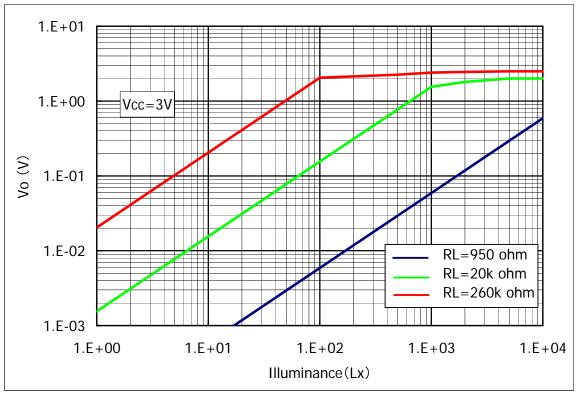
BCS2015A1 Characteristic of Output Voltage (Typical)





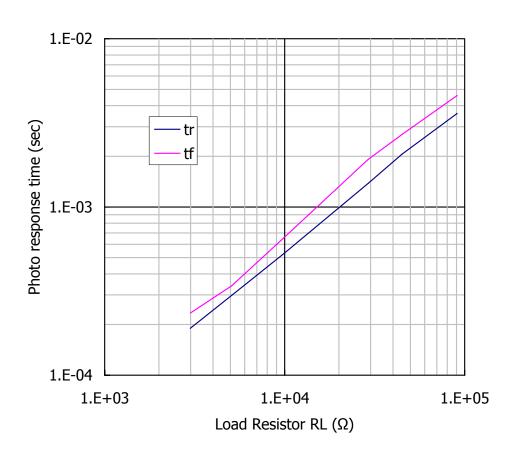




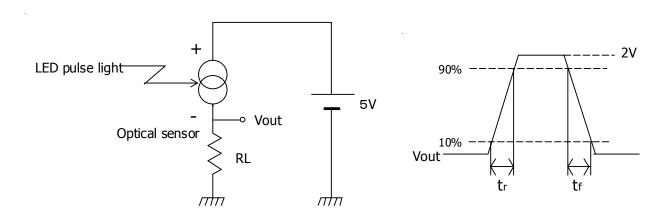




Typical photo response time: BCS2015A1 (typ.)

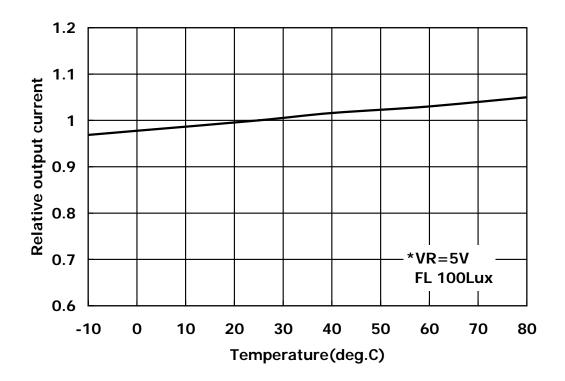


Measuring circuit

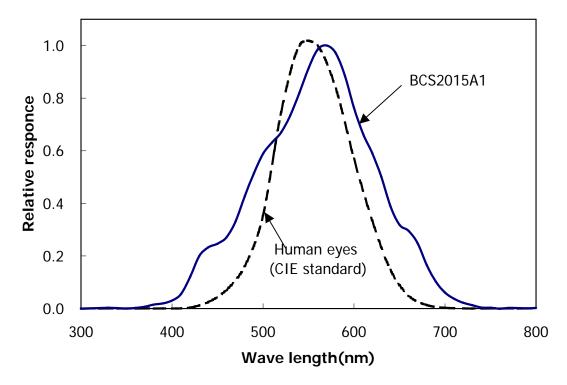




Temperature stability of output current:BCS2015A1 (typical)



Spectral response: BCS2015A1 (typical)

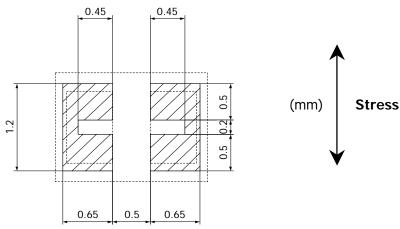




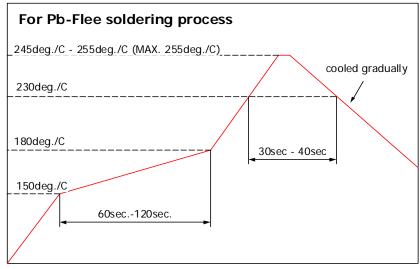
Recommended land pattern

Recommended land pattern is shown in Fig. Please arrange a land in the direction as shown in Fig. to the direction of curvature as the result of heat stress by reflow and/or

physical stress.



Recommanded reflow heat condition



*Pb Flee Solder is SnAgCu.

