



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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-amplifier in it. BCS2015A1 is for surface mounting.

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 amplifier)
- Surface mounting can be used in lead- free reflow soldering.
- Lead- free, Cadmium-free

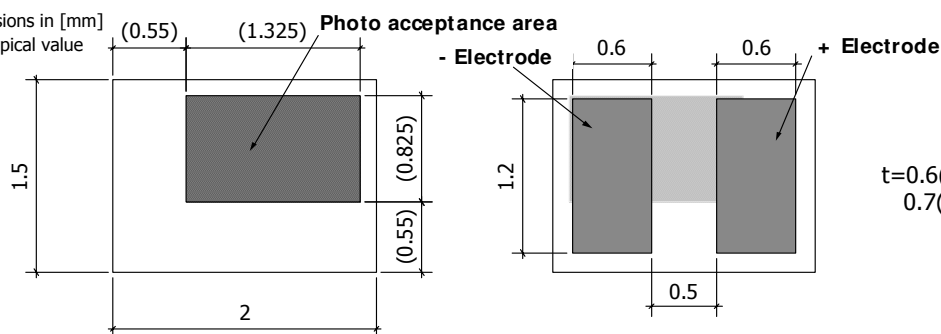
Application

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

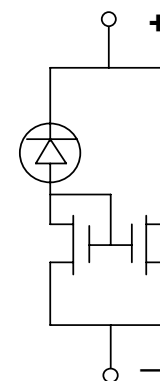
Shapes and dimension

Glass Substrate
BCS2015A1

Dimensions in [mm]
() : Typical value



Equivalent circuit



Electrical Characteristic

Temperature= 25deg.C

Item	Value			
	Units	Min.	Typ.	Max.
Output current 100Lux*1 Vop=5V	μA	6.0	8.0	10.0
Operation voltage (Vop) 100Lux*1	V	1.2	---	5.0
Dark current Vop=5V	nA	---	---	10

*Initial value

Absolute Maximum Ratings

Temperature= 25deg.C

Item	Value	
	Units	
Operation voltage	V	8
Reverse voltage	V	-1
Output current	mA	1

Optical Characteristic

Temperature= 25deg.C

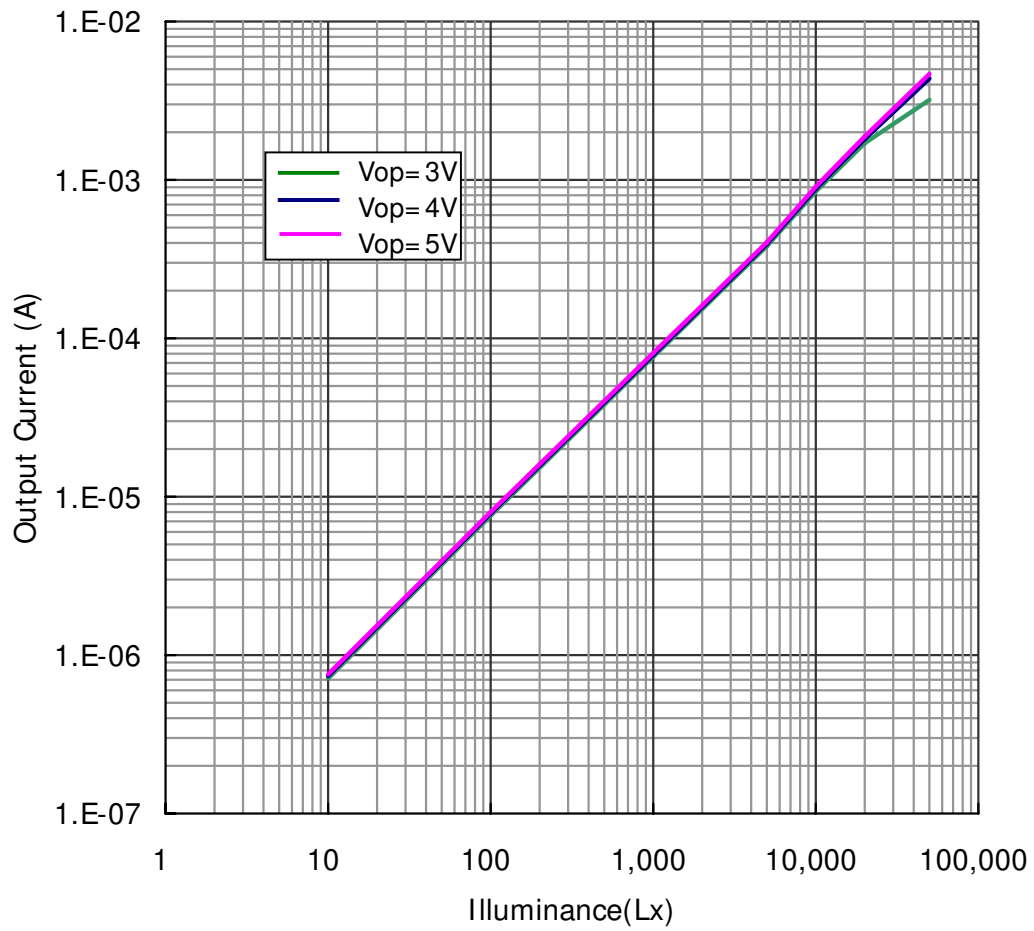
Item	Value	
	Units	
Spectral sensivity area	nm	350 to 750
Peak of sensivity	nm	580±20

Others

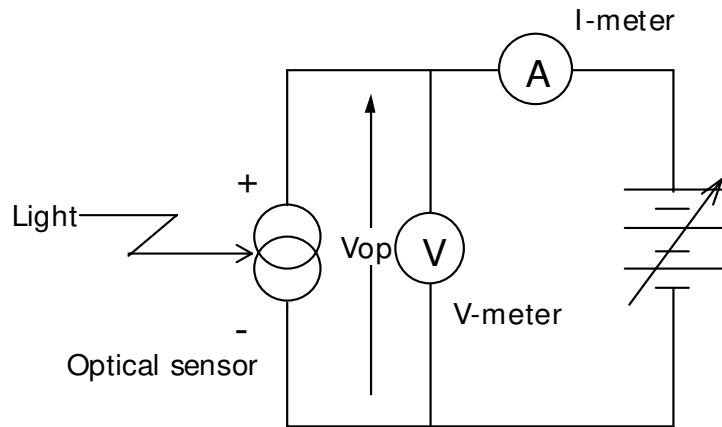
Item	Value	
	Units	
Operating temperature	deg. C	-20 to 85
Keep and transfer temperature	deg. C	-40 to 85
Dimensions	mm	2.0×1.5×0.6t
Weight	g	0.004

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

Output characteristic(typical) :BCS2015A1



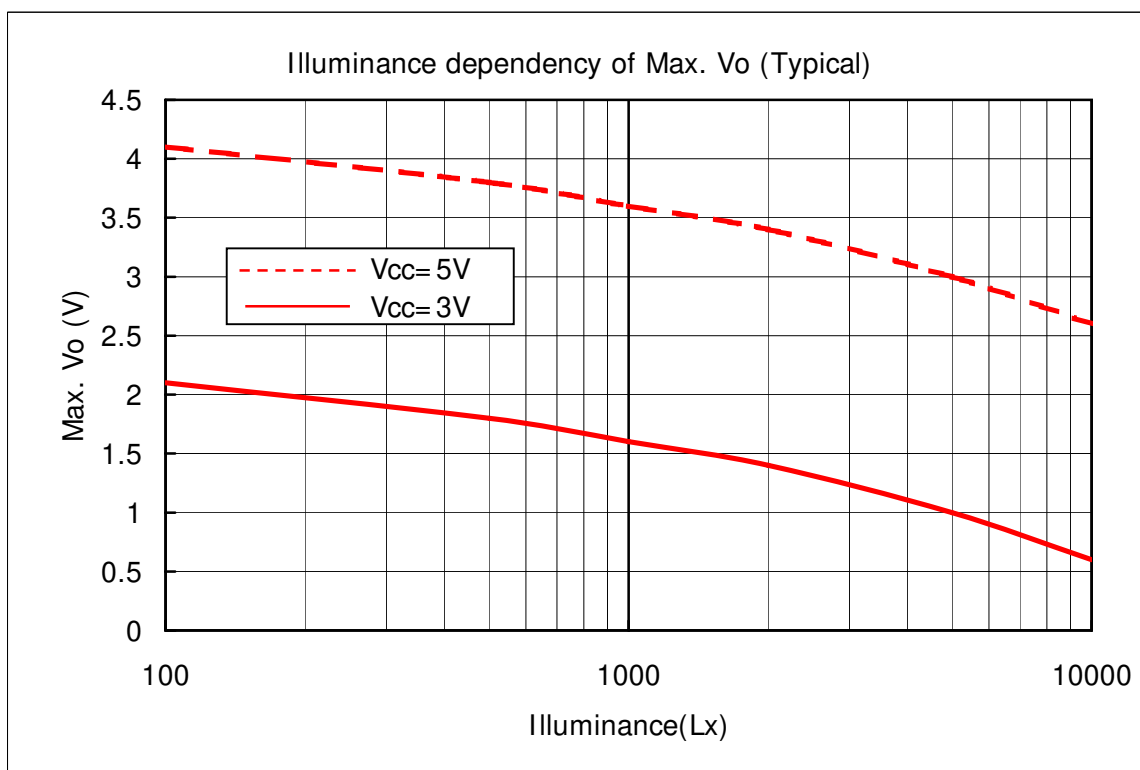
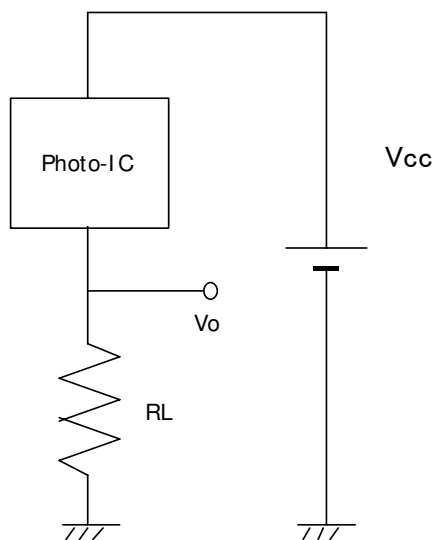
Measuring circuit diagram

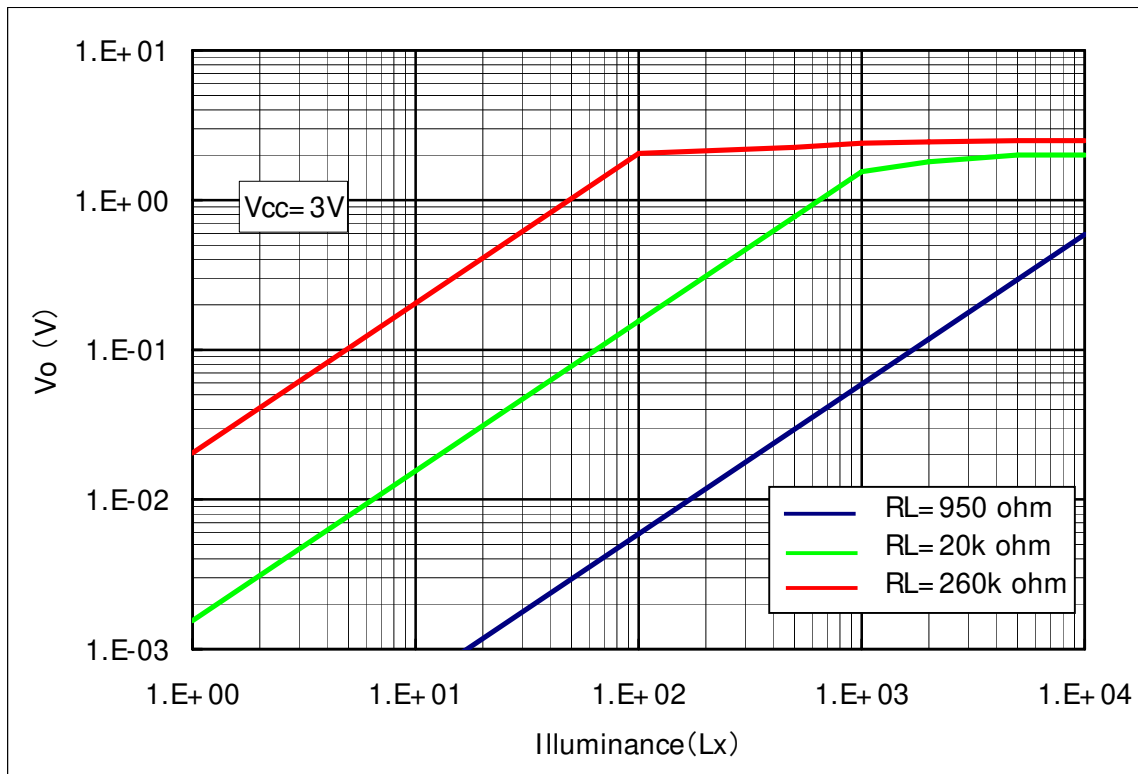
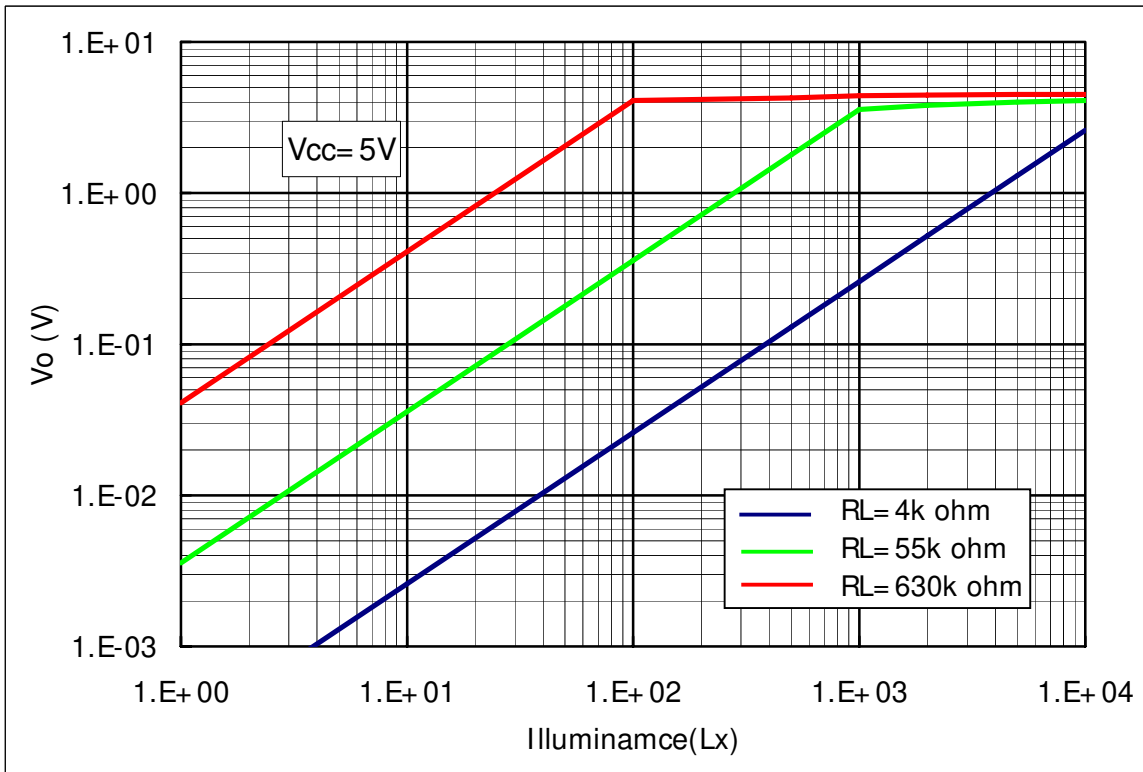


BCS2015A1

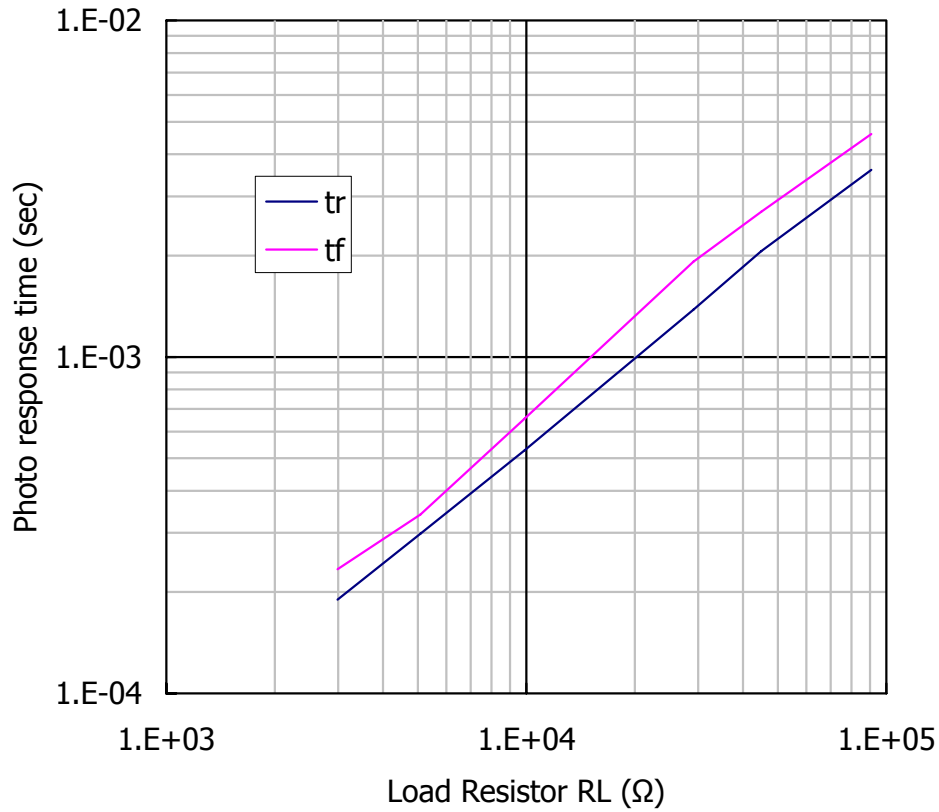
Characteristic of Output Voltage (Typical)

Measuring circuit

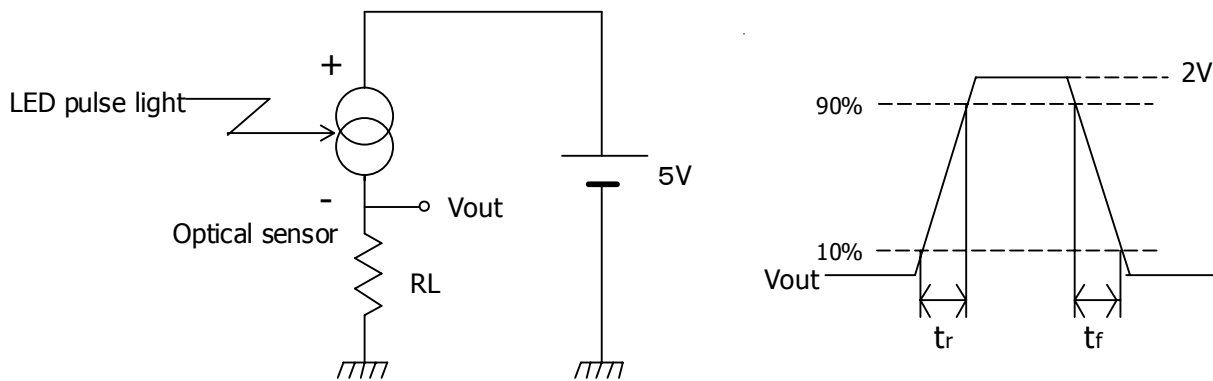




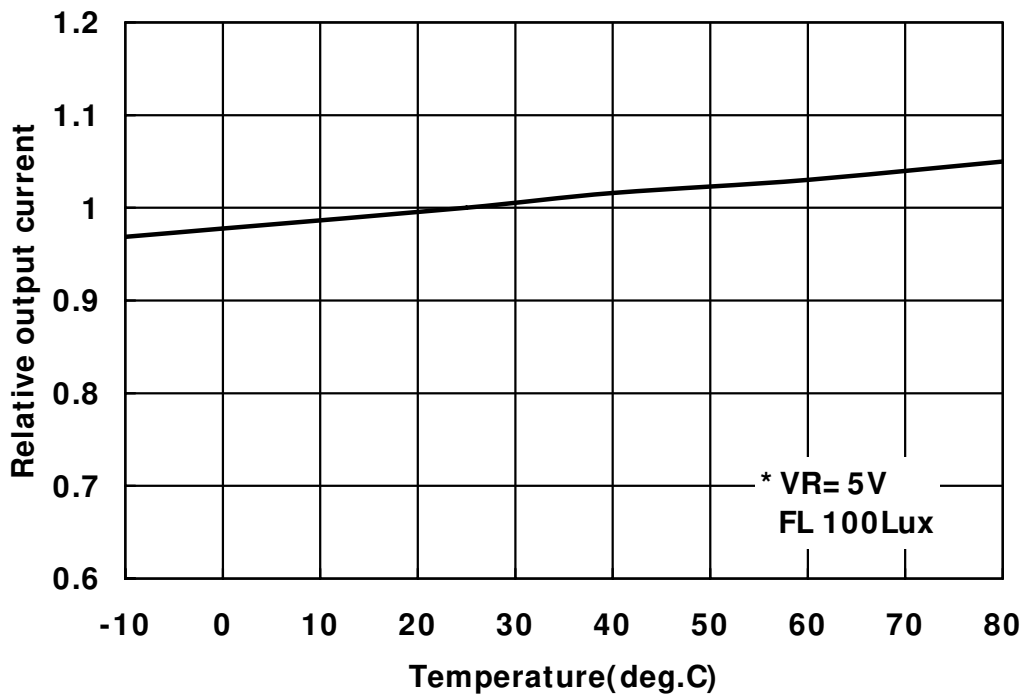
Typical photo response time:BCS2015A1 (typ.)



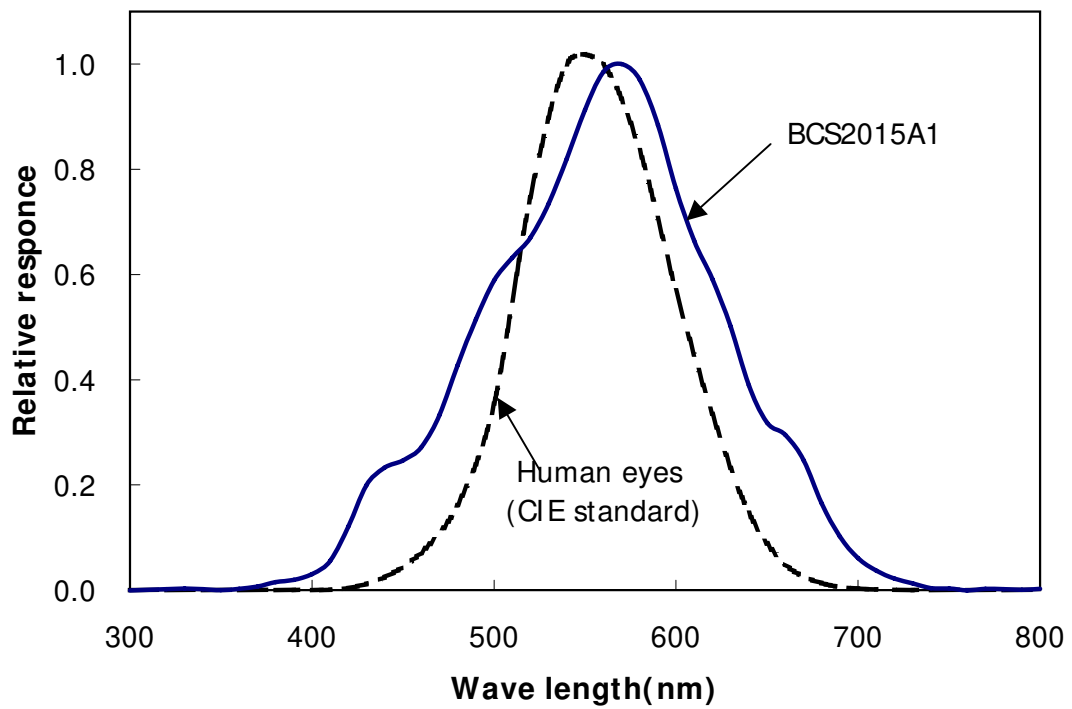
Measuring circuit



Temperature stability of output current:BCS2015A1 (typical)

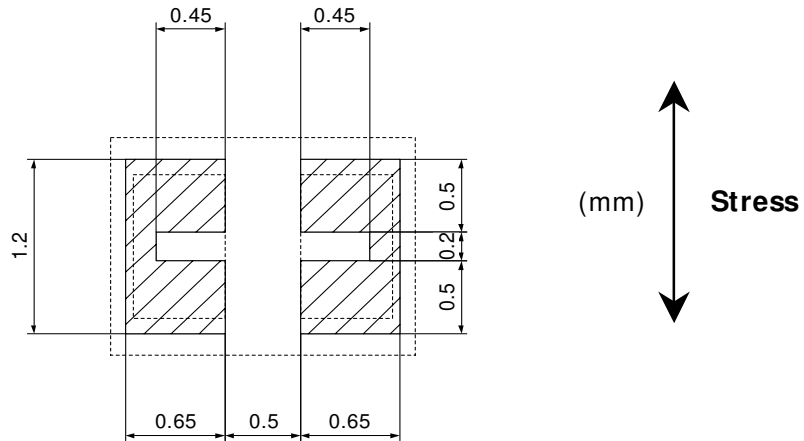


Spectral response:BCS2015A1 (typical)

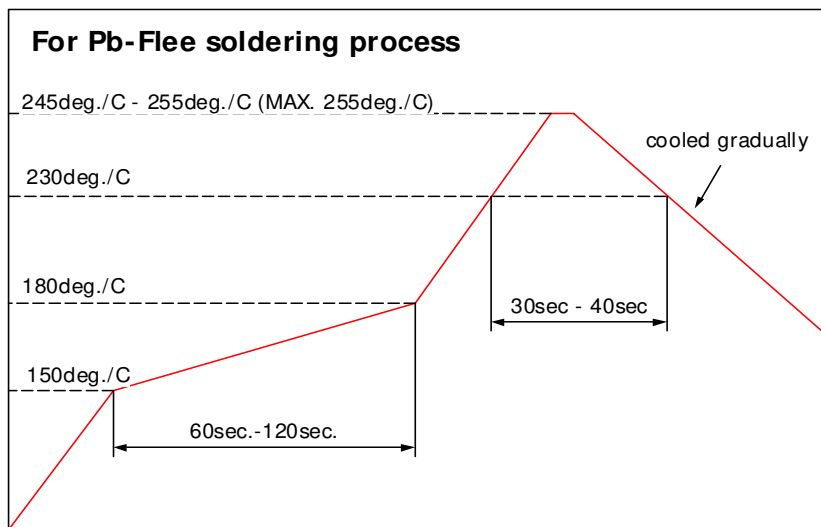


Recommended land pattern

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.



Recommended reflow heat condition



* Pb Free Solder is SnAgCu.

