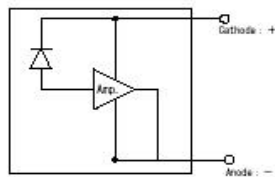




# LPRS

## Light Sensor

**Model: LSL100 / LSS100**


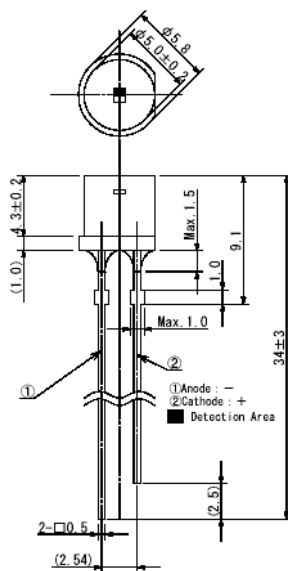
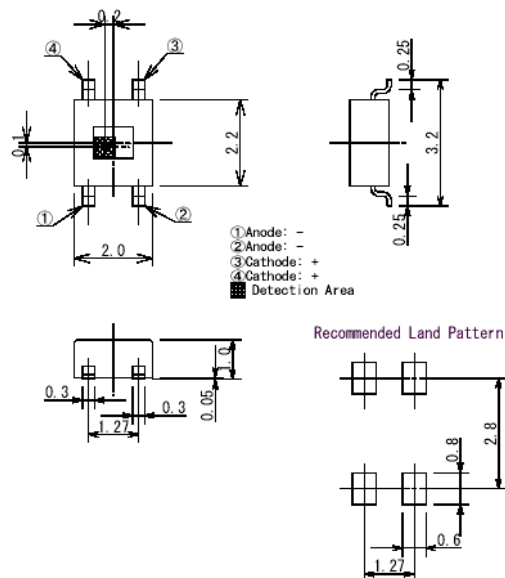
### ■ FEATURES

- RoHS compliant  
Cadmium-free, Lead-free
- Close to HUMAN EYE spectral response  
Built-in special optical filter
- Just as easy operation as a Cds photo cell  
Built-in amplifier achieves high photocurrent
- Suitable for low voltage battery operation

### ■ APPLICATIONS

- Automatic lighting  
Security lights, Street lights, etc.
- Automatic exposure control  
Cameras, CCTVs, Security cameras, etc.
- Dimmer for LCD backlight  
PDAs, LCD TVs, Mobile phones, Car navigations, etc.
- Dimmer for illumination  
Keypads for PDAs, Clocks, Watches, etc.

### ■ DIMENSIONS

**LSL100 Lead Wire Type**

**LSS100 SMD Type**


### ■ DIMENSIONS

PARAMETER	SYMBOL	SPECIFICATION	UNIT
Reverse Voltage	$V_R$	-0.5 to 8	V
Photocurrent	$I_L$	5	mA
Power Dissipation	P	40	mW
Operating Temperature *1)	$T_{opr}$	-30 to +85	°C
Storage Temperature *1)	$T_{sta}$	-40 to +100	°C

\*1) No freezing. No dewing.

### ■ RECOMMENDED OPERATING

PARAMETER	SYMBOL	MINIMUM	MAXIMUM	UNIT
Reverse Voltage	$V_R$	1.5	6.0	V



# LPRS

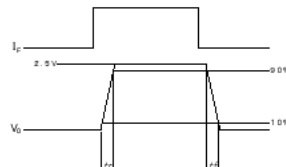
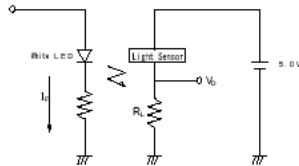
## ELECTRICAL and OPTICAL CHARACTERISTICS (Ta = 25°C)

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Sensitivity Wavelength	$\lambda_p$		-	580	-	nm
Dark Current	$I_D$	$V_R=5V, E_v=0$	-	-	0.3	$\mu A$
Photocurrent 1 *1)	$I_{L1}$	$V_R=5V, E_v=5 \text{ lx}$	9.1	13	16.9	$\mu A$
Photocurrent 2 *1)	$I_{L2}$	$V_R=5V, E_v=100 \text{ lx}$	182	260	338	$\mu A$
Photocurrent 3 *2)	$I_{L3}$	$V_R=5V, E_v=100 \text{ lx}$	-	500	-	$\mu A$
Switching Time *3)	Rise Time	$V_R=2.5V, V_D=2.5V$ $R_L=5k\Omega$	-	8.5	-	ms
	Fall Time		-	8.5	-	

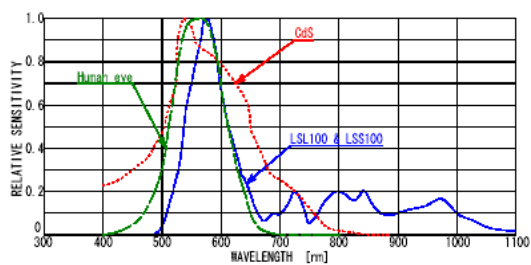
\*1) Light Source: Fluorescent lamp

\*2) Light source: CIE standard illuminant 'A'

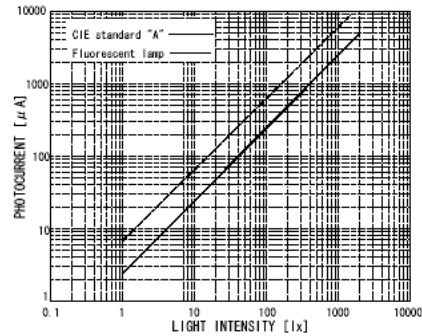
\*3) Measuring method for switching time.



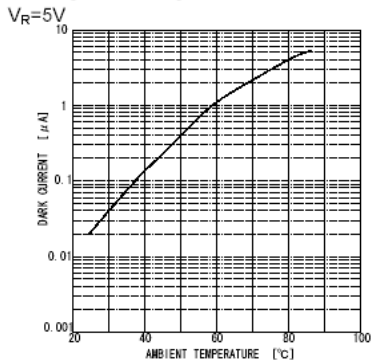
## SPECTRAL RESPONSE Ta=25°C



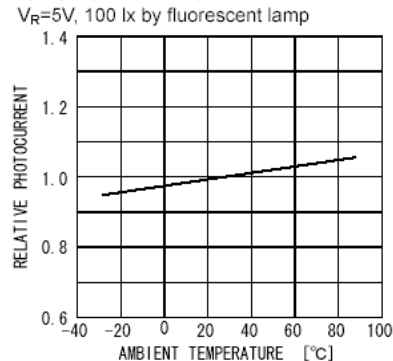
## PHOTOCURRENT LINEARITY V\_R=5V, Ta=25°C



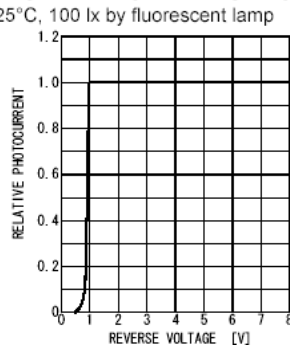
## DARK CURRENT vs. AMBIENT TEMPERATURE V\_R=5V



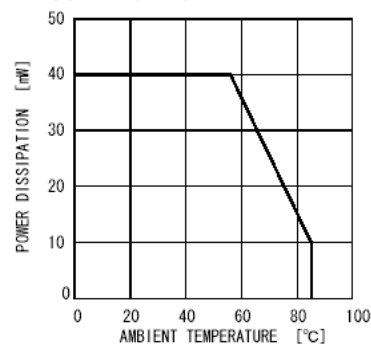
## PHOTOCURRENT vs. AMBIENT TEMPERATURE V\_R=5V, 100 lx by fluorescent lamp



## PHOTOCURRENT vs. REVERSE VOLTAGE Ta=25°C, 100 lx by fluorescent lamp



## POWER DISSIPATION vs. AMBIENT TEMPERATURE



Product description	Order code
Lead Wire Light Sensor	LSL100
Surface Mount Light Sensor	LSS100

Please contact the sales office on +44 1993 776488.