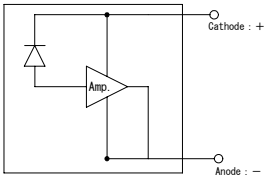
NiCERA Light Sensor Model: LSL100 / LSS100



■ FEATURES

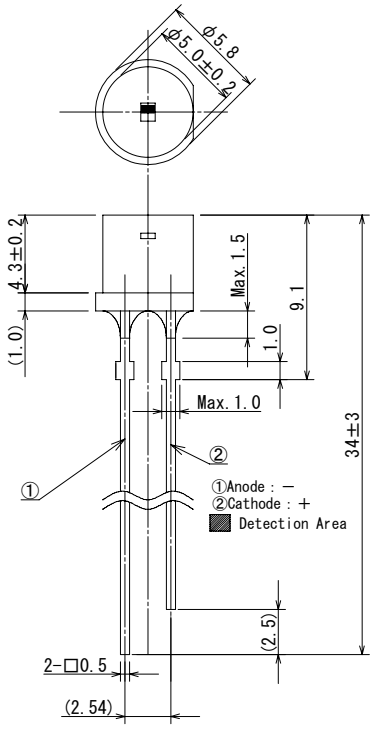
- ●RoHS compliance
  Cadmium-free, Lead-free.
- ●Close to HUMAN EYE spectral response
  Built-in special optical filter.
- ●Just easy operation as a CdS photo cell
  Built-in amplifier achieves high photocurrent.
- ●Available for low voltage operation
  Suitable for battery operation.

■ APPLICATIONS

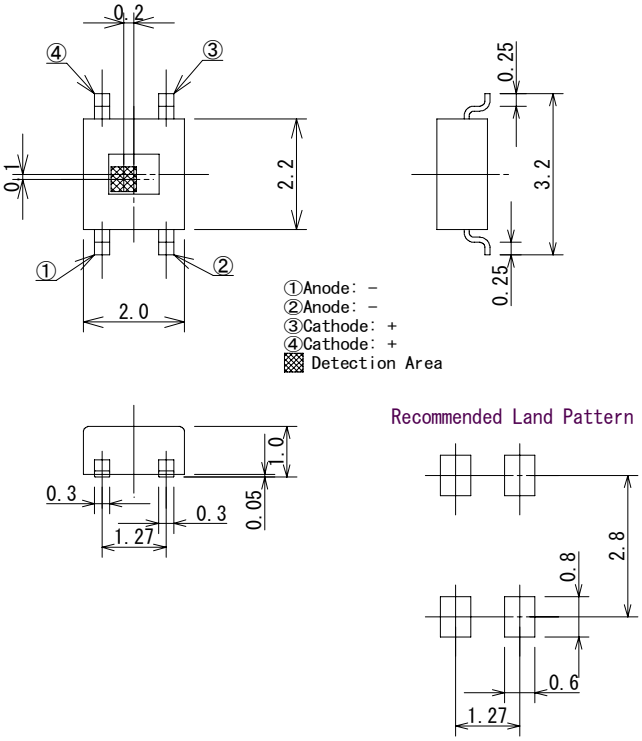
- ●Automatic lighting
  Security lights, Street lights, etc.
- ●Automatic exposure control
  Cameras, CCTVs, Security cameras, etc.
- ●Dimmer for LCD backlight
  PDAs, LCD TVs, Mobile phones, Car navigations, etc.
- ●Dimmer for illumination
  Keypads for PDAs, Clocks, Watches, etc.

■ DIMENSIONS

LSL100 Lead Wire Type



LSS100 SMD Type



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

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_{stg}	-40 to +100	°C

*1) No freezing. No dewing.

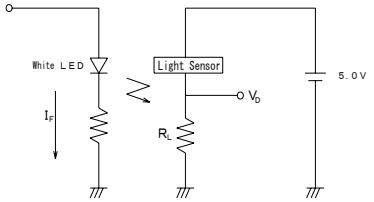
■ RECCOMENDED OPERATING VOLTAGE

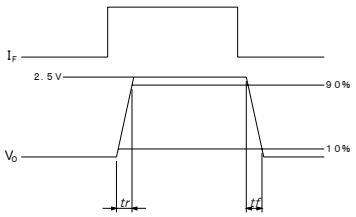
PARAMETER	SYMBOL	MINIMUM	MAXIMUM	UNIT
Reverse Voltage	V_R	1.5	6.0	V

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

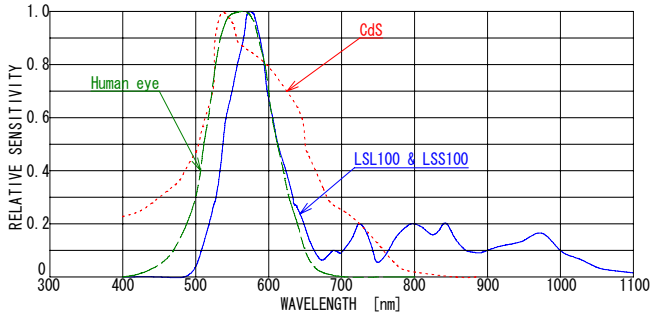
PARAMETER		SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Sensitivity Wavelength		λ_p		-	580	-	nm
Dark Current		I_D	V_R=5V, E_V=0	-	-	0.3	μA
Photocurrent 1 *1)		I_{L1}	V_R=5V, E_V=5 *lx*	9.1	13	16.9	μA
Photocurrent 2 *1)		I_{L2}	V_R=5V,E_V=100 *lx*	182	260	338	μA
Photocurrent 3 *2)		I_{L3}	V_R=5V,E_V=100 *lx*	-	500	-	μA
Switching Time *3)	Rise Time	t_r	V_R=2.5V, V_D=2.5V	-	8.5	-	ms
	Fall Time	tf	R_L=5kΩ	-	8.5	-	

*1) Light Source: Fluorescent lamp *2) Light source: CIE standard illuminant 'A'
*3) Measuring method for switching time.

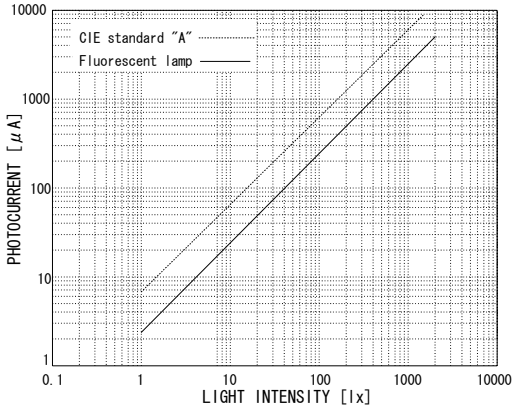




■ SPECTRAL RESPONSE Ta=25°C

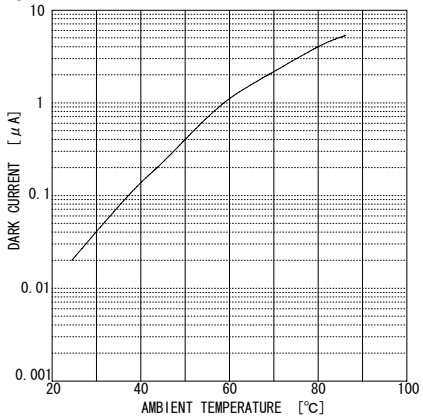


■ PHOTOCURRENT LINEARITY V_R=5V, Ta=25°C



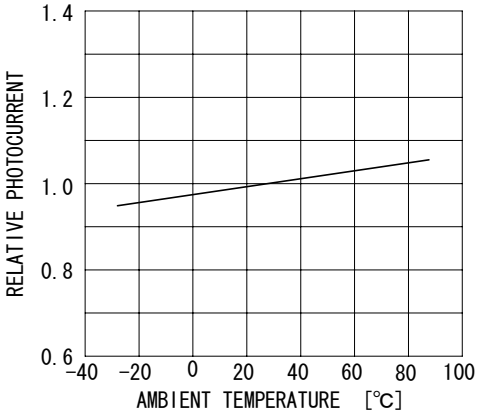
■ DARK CURRENT vs. AMBIENT TEMPERATURE

V_R=5V



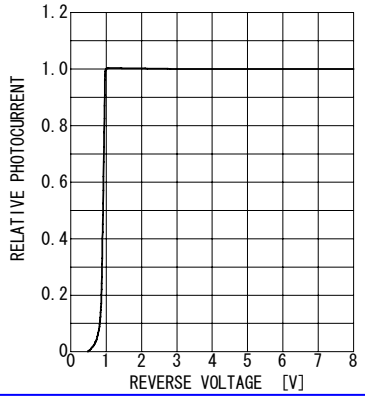
■ PHOTOCURRENT vs. AMBIENT TEMPERATURE

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