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# PNA4603H

## Bipolar integrated circuit with photodetection functions

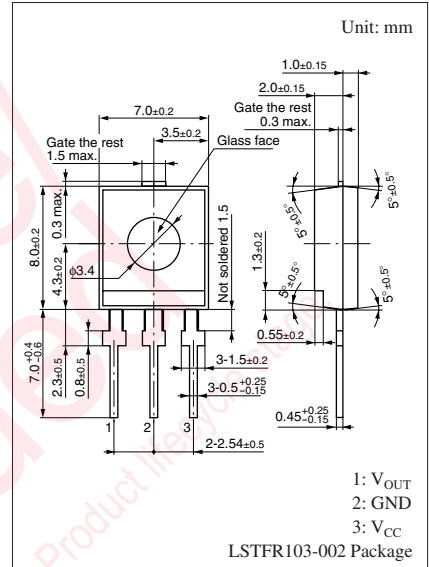
For brightness control systems

### ■ Features

- Wavelength characteristics close to human visual sensitivity
- External parts not required
- Good output voltage linearity with respect to incident illuminance

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

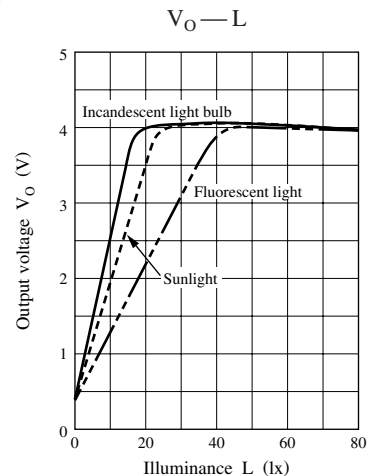
Parameter	Symbol	Rating	Unit
Collector supply voltage	$V_{CC}$	7	V
Power dissipation	$P_D$	200	mW
Operating ambient temperature	$T_{opr}$	-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$



### ■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$ , $V_{CC} = 5\text{ V}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector supply voltage	$V_{CC}$		4.5	5.0	5.5	V
Supply current	$I_{CC}$	$V_{CC} = 5.25\text{ V}$	0.5	1.0	1.5	mA
Output voltage	$V_{OFF}$	$L = 0\text{ lx}$ , $V_{CC} = 5.0\text{ V}$	0.1	0.5	0.8	V
	$V_{O1}^{*1}$	$L = 10\text{ lx}$ , $V_{CC} = 5.0\text{ V}$	2.0	2.7	3.4	
	$V_{O2}^{*1}$	$L = 800\text{ lx}$ , $V_{CC} = 5.0\text{ V}$	3.9	4.1	4.9	
Voltage ripple <sup>*1, 2, 3</sup>	$R_{O1}$	$V_{O1} - V_{OFF}$ , $V_{CC} = 5.0\text{ V}$	1.65	1.90	3.30	
		$L = 10\text{ lx}$ , $V_{CC} = 5.0\text{ V} + 10\text{ mV[p-p]} (f = 120\text{ Hz})$	0.0	0.8	1.2	V
Output impedance <sup>*3</sup>	$Z$		5.0	10.0	15.0	k $\Omega$
Peak emission wavelength <sup>*3</sup>	$\lambda_p$		400	600	700	nm

- Note) \*1: The origin of light use a halogen lamp.  
 \*2: Peak to peak value of output AC voltage.  
 \*3: Design guaranteed.



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