

PNA4603H

Bipolar integrated circuit with photodetection functions

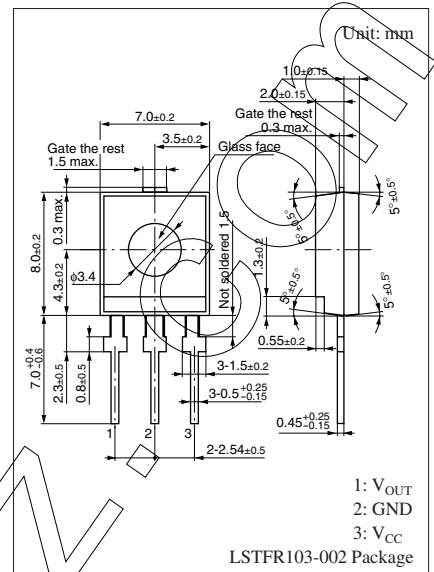
For brightness control systems

■ 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	$^\circ\text{C}$

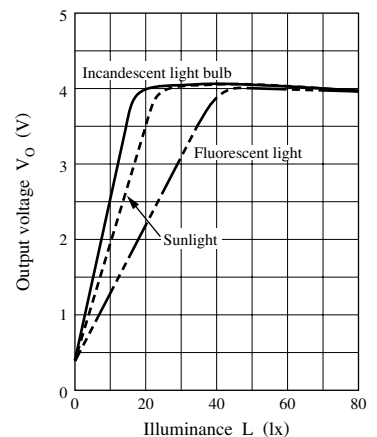


■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$, $V_{CC} \geq 5\text{V}$

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	
	η	$V_{O1} - V_{OFF}$, $V_{CC} = 5.0\text{ V}$	1.65	1.90	3.30	
Voltage ripple ^{*1, 2, 3}	R_{O1}	$L = 10\text{ lx}$, $V_{CC} = 5.0\text{ V} + 10\text{ mV[p-p]} (f = 120\text{ Hz})$	0.0	0.8	1.2	V
Output impedance ^{*3}	Z		5.0	10.0	15.0	k Ω
Peak emission wavelength ^{*3}	λ_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.

$V_O - L$



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