

AMBIENT LIGHT SENSOR NJL7302L-F3



The **NJL7302L-F3** is a **phototransistor** with spectral response similar to human eyes and wide directivity.

FEATURES

- » High IR reduction
- » Lead pin package

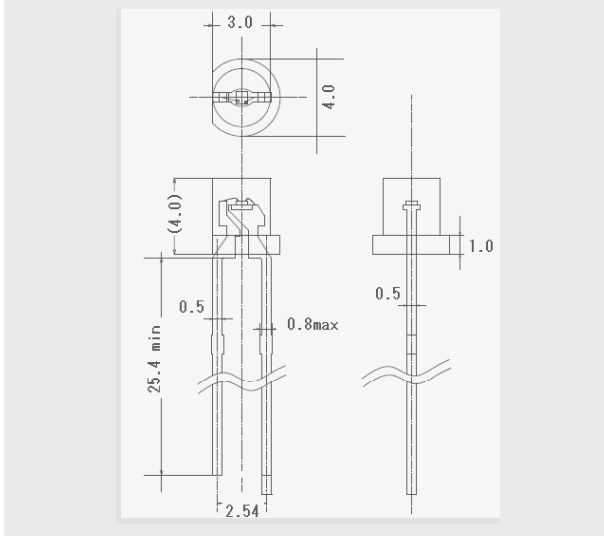
APPLICATIONS

- » CCTV control etc.

MAXIMAL RATINGS

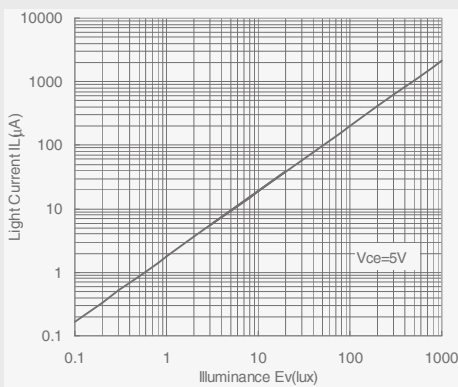
PARAMETER		VALUE
Collector-Emitter Voltage	V_{CE0} [V]	15
Emitter-Collector Voltage	V_{CE0} [V]	2
Power Dissipation	P_D [mW]	150
Operating Temperature	T_{OPR} [°C]	-30 ... +70
Storage Temperature	T_{STG} [°C]	-40 ... +100
Soldering Temperature	T_{SOL} [°C]	260

DIMENSIONS (mm)

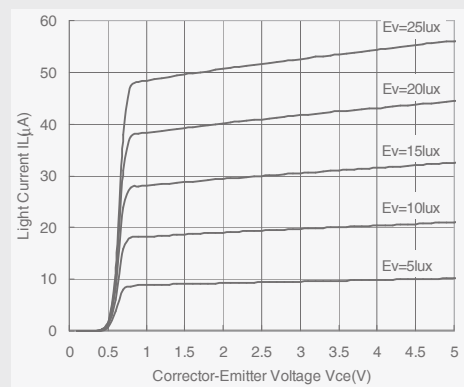


TYPICAL CHARACTERISTICS

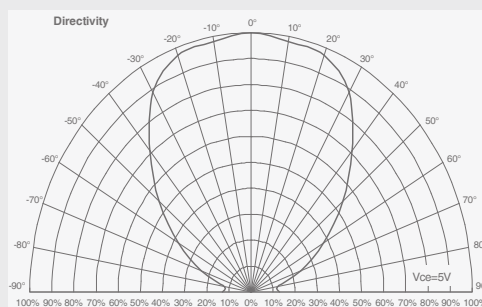
Light Current vs. Illuminance



Light Current vs. Collector-Emitter Voltage



Directivity

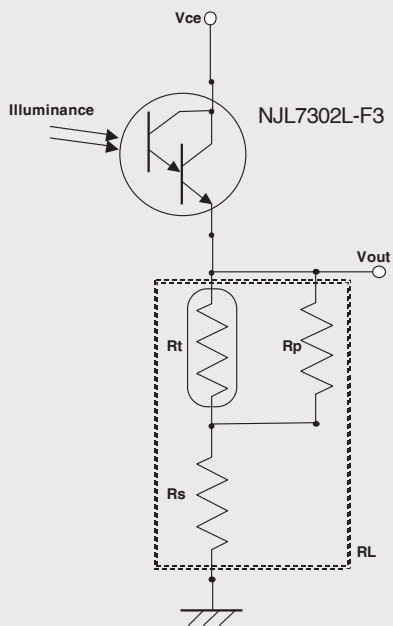


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ELECTRO-OPTICAL CHARACTERISTICS

PARAMETER	TEST COND.	MIN.	TYP.	MAX.
Light current I_{L1} [μ A]	$V_{CE}=5V$, Light source A, 10 Lux	–	20	–
Light current I_{L2} [μ A]	$V_{CE}=5V$, white LED, 10 Lux	10	20	50
Comparison I_{L2}/I_{L1}	–	–	1	–
Dark current I_D [nA]	$V_{CE}=5V$	–	–	100
Collector-Emitter saturation voltage $V_{CE(SAT)}$ [V]	$I_L=6\mu A$, $E_v=10$ Lux	–	–	1.4
Peak wave length λ_p [nm]	–	–	550	–
Half angle $\Theta_{1/2}$ [deg.]	–	–	± 55	–
IR reduction ratio IR_re [%]	Relative sensitivity (%) @850 nm, $\lambda_p=100\%$	–	0.007	–

APPLICATION CIRCUIT (with temperature compensation circuit (TCC))



Example

Condition : $V_{ce}=5V$, $E_v=5lux$, $V_{out}=1.0V$

Rt: NTC thermistor
 Rs: Chip resistor
 Rp: Chip resistor

Rt	100k Ω
Rs	33k Ω
Rp	180k Ω

