

Ambient Light Sensor

Description

GT443PT-Z (series) ambient light sensor plays a key role in power savings strategies by controlling LCD display intensity and keypad backlighting of mobile devices and in commercial on/off-lighting operation.

It is sensitive to visible light much like the human eye and has Peak sensitivity at 520 nm, Is photo -IC daylight sensor with Optical filterless . it has both low drive voltage and output in Proportion to illumination, and it has not sensitivity in a long Wavelength domain.



Features

- High sensitivity
- Adapted to human eye responsivity
- Lead (Pb)-free component in accordance with RoHS

Applications

Ambient light sensor for control of display backlight dimming in LCD displays and keypad backlighting of mobile devices and in commercial on/off-lighting operation.

- Notebook computers
- PDA's
- Cameras

Absolute Maximum Ratings

(Ta=25°C)

Ltem	Symbol	Ratings	Unit	Remarks
Supply voltage	Vcc	-0.3~10	v	-
Operating temp*1	Topr	-20~+85	°C	-
Storage temp	Tstg	-30~+100	°C	-
Soldering temp	Tsol	260	°C	-

Note:*1.Vcc=5V,RL=100Ω**Recommendable operating voltage**

(Ta=25°C)

Ltem	Symbol	Ratings	Unit	Remarks
Supply voltage	Vcc	1.8-6.0	v	-

Electro-optical characteristics

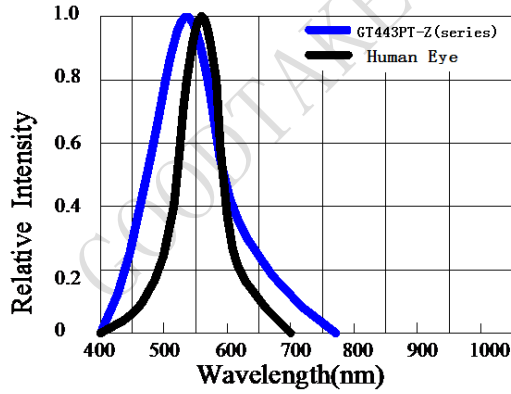
(VCC=5V、A light source、Ta=25°C)

Ltem	Symbol	condition	Min	Typ	Max	Unit
Dark current	I_d	E= 0lx, Vce=5.0v			200	nA
Light current	I_L (GT443PT-Z1)	Ev = 100 lx, A,※1		290		μA
	I_L (GT443PT-Z2)			370		μA
	I_L (GT443PT-Z3)			440		μA
Light current	I_L (GT443PT-Z1)	Ev = 1.5 lx, A,※1		4.4		μA
	I_L (GT443PT-Z2)			5.5		μA
	I_L (GT443PT-Z3)			6.6		μA
Peak wavelength	λ_p			520		nm
Spectral sensitivity	λ		400		750	nm
Half angle	$\Delta \theta$			±65°		deg

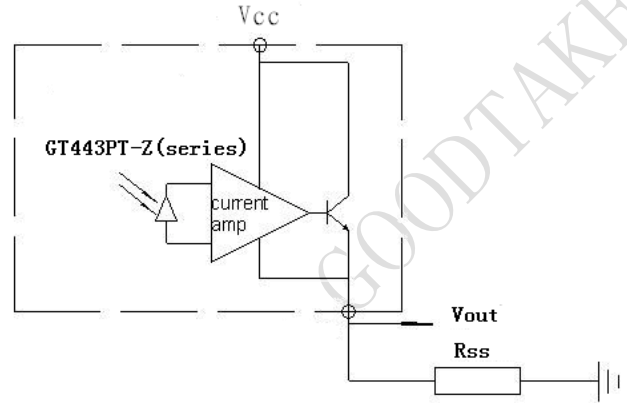
※ 1 The inspection process shall substitute for LED(2856k)

Typical Characteristics

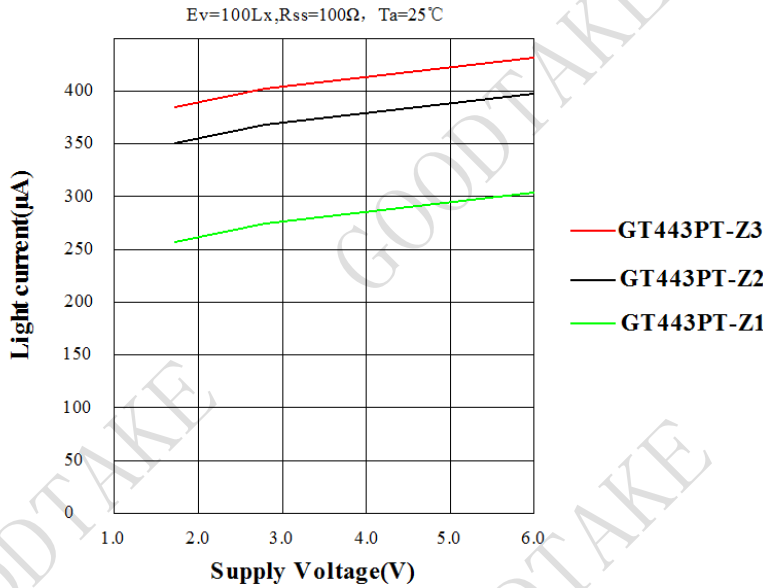
Spectrum sensitivity



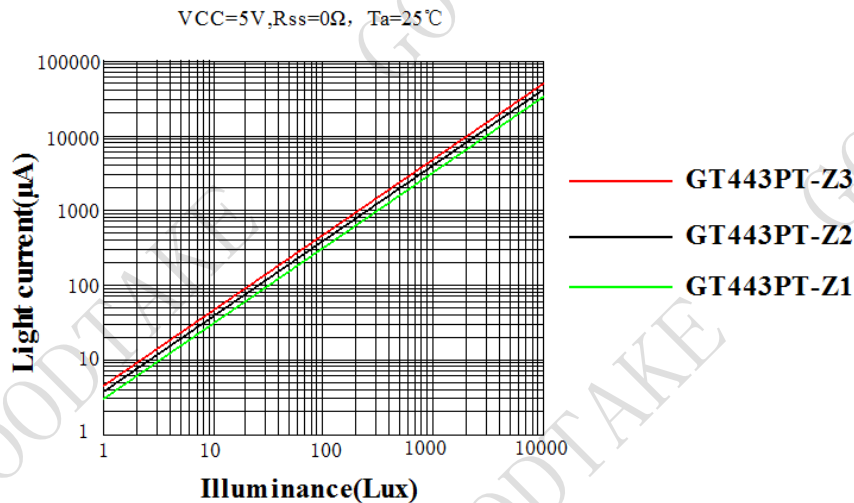
Application circuit



Light current & supply voltage

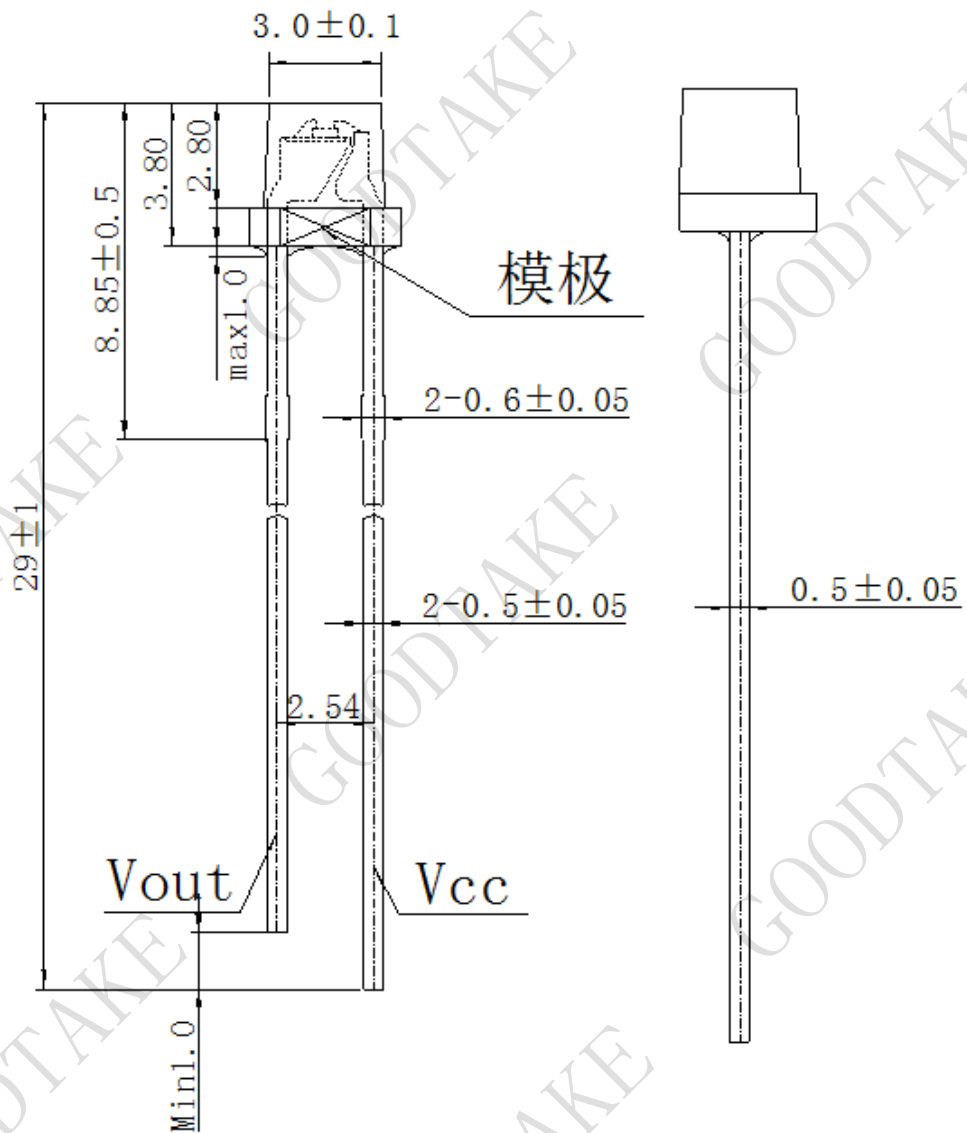
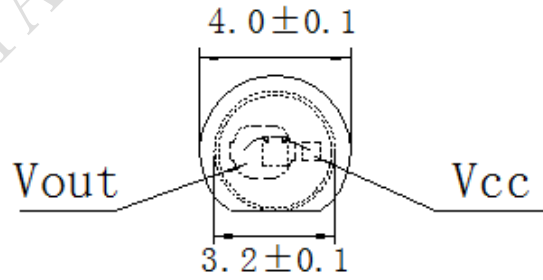


Light current & illuminance



Package Outline

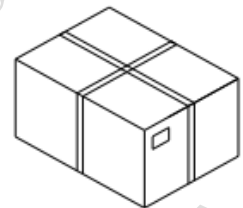
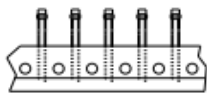
NOTE: 1. All dimensions are in millimeter, tolerance is ± 0.2 unless otherwise noted.



Packing

Ammo pack radial taped

1. Fixed quantity(3000pcs) of the products are packed into inner packing plastic bags;
2. The inner packing plastic bags into inner box and sealed with a plastic bag;
3. Ten inner boxes are put into #box(max30.000pcs), Packing slit is pasted on the out box



Inner packing plastic bags

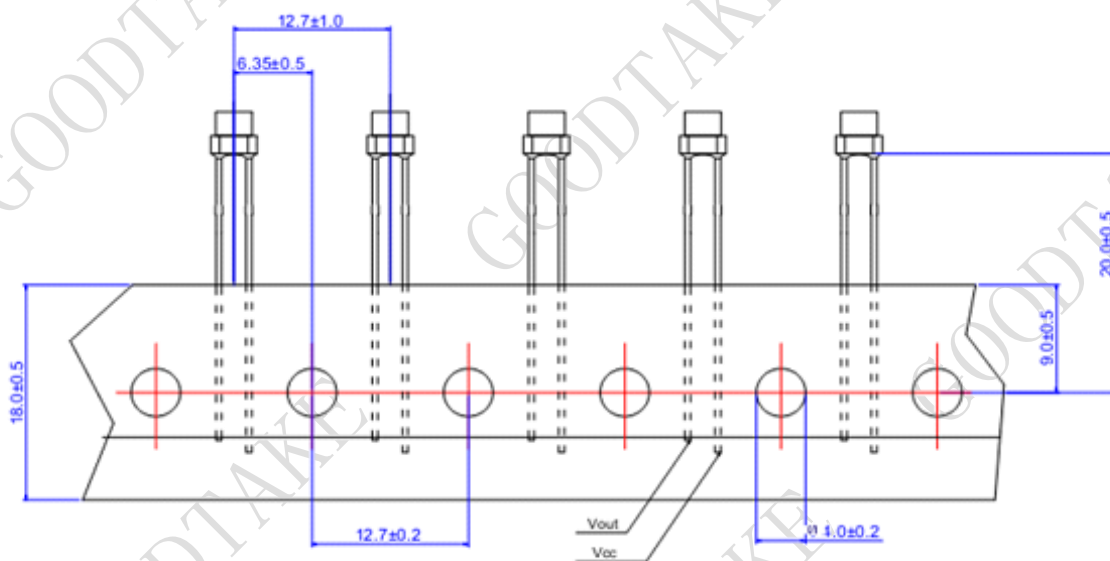


into inner box and sealed with a plastic bag



out box

Taping Specification



单位: mm

Shelf life

Devices should be stored in its original packing, in a controlled environment of temperature less than 40° C and relative humidity below 90%. Suggested shelf life is 6 months in its original packing.

Floor life

Time between soldering and removing from moisture barrier bags must not exceed the time indicated in J-STD-020.

Moisture sensitivity:level 3

Floor life:168h

Conditions:Tamb<30°C, RH<60%