IS445/IS455 Linear Output Type OPIC Light Detector

T-41-67

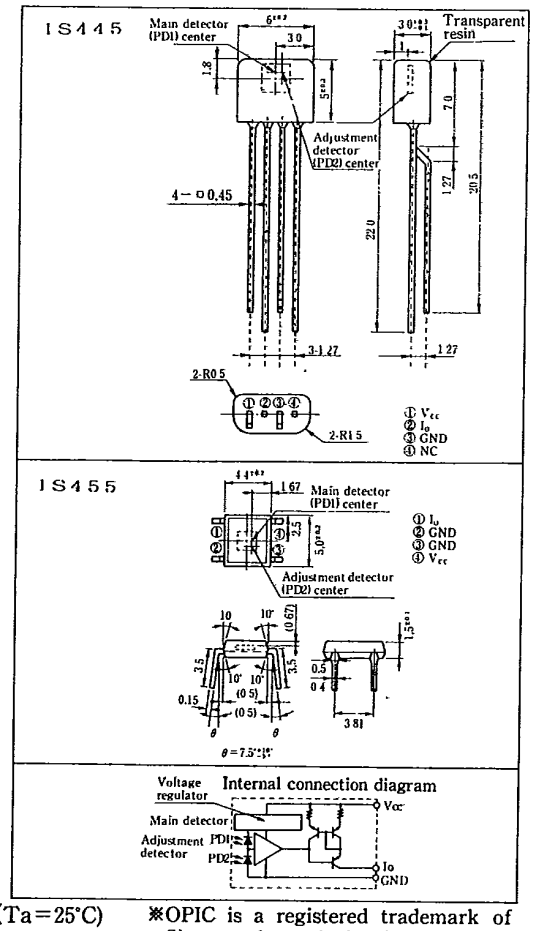
■ Features

1. Liner output
2. Two packages according to mounting method
   Side-view type (IS445)
   Top-view type (IS455)
3. Capable of output voltage level adjustment due to external resistor

■ Applications

1. Copiers

■ Outline Demensions



■ Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
Supply voltage		V_{CC}	−0.5~+8	V
Output voltage		V_O	−0.5~V_{CC}	V
Output current		I_O	−10	mA
Power dissipation	IS445	P_O	250	mW
	IS455		150	mW
Operating temperature		T_{opr}	−25~+85	°C
Storage temperature	IS445	T_{stg}	−40~+100	°C
	IS455		−40~+85	
*1Soldering temperature		T_{sol}	260	°C

*1 For 3 seconds at the position of 1mm from the bottom face of resin package. (IS455)
Immersed up to bending portion, for 5 seconds (IS445)

※OPIC is a registered trademark of Sharp and stands for Optical IC. It has a light detecting element and signal processing circuitry integrated onto a single chip.

■ Electro-optical Characteristics

(Ta=25°C, V_{CC}=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Supply current	I_{CC}	E_V=0 ℓx	0.2	0.55	1.0	mA
Output current 1	I_{O1}	E_V=10 ℓx*2	−6.5	−10	−13.5	μA
Output current 2	I_{O2}	E_V=1,000 ℓx*2	−0.65	−1	−1.35	mA
*3Output current ratio	R_{IO}		92	100	108	—
Dark output current	I_{od}	E_V=0	—	−10	−500	nA
Peak sensitivity wavelength	λ_P		—	700	—	nm

*2 E_V: Illuminance by CIE standard light source A (tungsten lamp)

*3 $RIO=\frac{I_{O2}}{I_{O1}}$

■ Recommended Operating Conditions

Parameter	Symbol	MIN.	MAX.	Unit
Supply voltage	V_{CC}	4.5	5.5	V
*4Illuminamce	E_V	10	5000	ℓx
Output voltage	V_O	0	V_{CC}−1.5	V
Oparating temperature	T_{opr}	−10	70	°C

*4 E_V: Illuminamce by standard light source A (tungsten lamp)

4

Fig. 1 Power Dissipation vs. Ambient Temperature

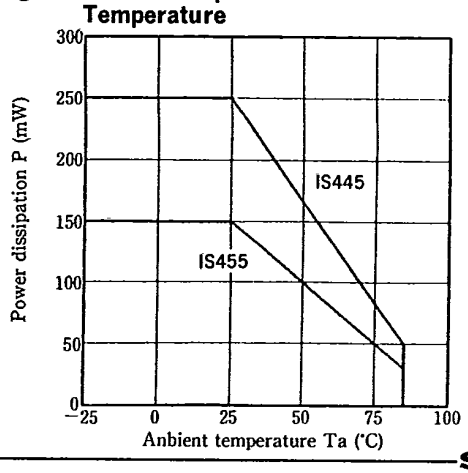


Fig 2 Output Current vs. Illuminance

