

1. Scope :

This specification applies to NPN ambient light photo transistor chips,
Device No. ST-0136-E.

2. Structure :

- 2-1. Planar type.
- 2-2. Electrodes :
 - N (Collector) side : Gold.
 - P (Base) side : Aluminum alloy.
 - N (Emitter) side : Aluminum alloy.

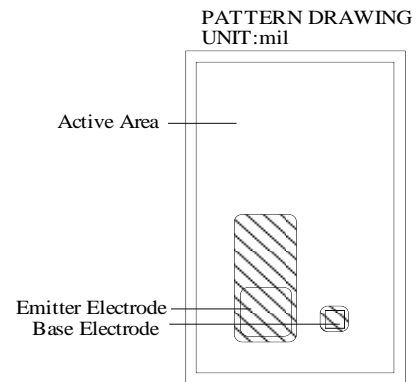
3. Size :

- 3-1. Chip size : 24 mils × 36 mils (0.610 mm × 0.914 mm).
- 3-2. Chip thickness : 7.5 ± 1.5 mils (0.191 ± 0.038 mm).
- 3-3. Active area : 16 mils × 28 mils (0.406 mm × 0.711 mm).
- 3-4. Bonding pad diameter: 6 mils ± 0.8 mils (0.150 mm ± 0.02 mm).
- 3-5. Pattern drawing : refer to the attached drawing.

*Including scribing line .The chip size is about (0.585±0.025)×(0.585± 0.025)mm² after dicing.

4. Electrical characteristics (Ta = 25 °C) :

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector-emitter Breakdown Voltage	BV _{CEO}	I _C =100uA I _B =0	60			V
Emitter-collector Breakdown Voltage	BV _{ECO}	I _E =10uA I _B =0	5			V
Collector dark current	I _{CEO}	V _{CE} =20V H=0mw/cm ²			100	nA
Collector-emitter Saturation Voltage	V _{CE(S)}	I _C =2mA I _B =100uA			0.3	V
Rise/fall time	t _r /t _f	V _{CE} =5V I _C =1mA R _L =1000Ω		15/15		uS
Current gain	h _{FE}	V _{CE} =5V I _C =2mA	200			
Junction cappacitance	C _{CB}	f=1MHZ V _{CB} =3V	6.2	7.2	8.2	PF



*1 hFE rank table.

Rank	Chip Spec.	
	hFE range	
	MIN	MAX
A	500	1000
B	800	1200
C	1000	1800

5. E-mapti

5.1 This product provides E-map to customer.