INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
RT5-2387E10TBTK	AlGaAs/AlGaAs	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25℃

Characteristic	Symbol	Rating	Unit
Forward direct current	I_{FM}	100	mA
Reverse voltage	V_{RM}	4	V
Operating temperature	Topr	-40 to +85	℃
Storage temperature	Tstg	-40 to +100	℃
Power dissipation	Pd	200	mW
Lead soldering temperature (3mm from body) 260℃ for 5sec.			

3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25℃

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant intensity	Ie	IF=50mA		145		mW/sr
Forward voltage	V_F	IF=100mA		1.75	2.0	V
Reverse current	I_R	V_R=4V			10	μA
Peak emission wavelength	λp	IF=20mA		850		nm
Spectral band width @ 50%	Δλ	IF=20mA		50		nm
Rise time/Fall time	tr/tf	IF=20mA		25/13		ns
Viewing angle	2θ 1/2	IF=20mA		10		deg.

Radiant Intensity Measurement allowance is ±15%

Forward voltage Measurement allowance is ±0.05V

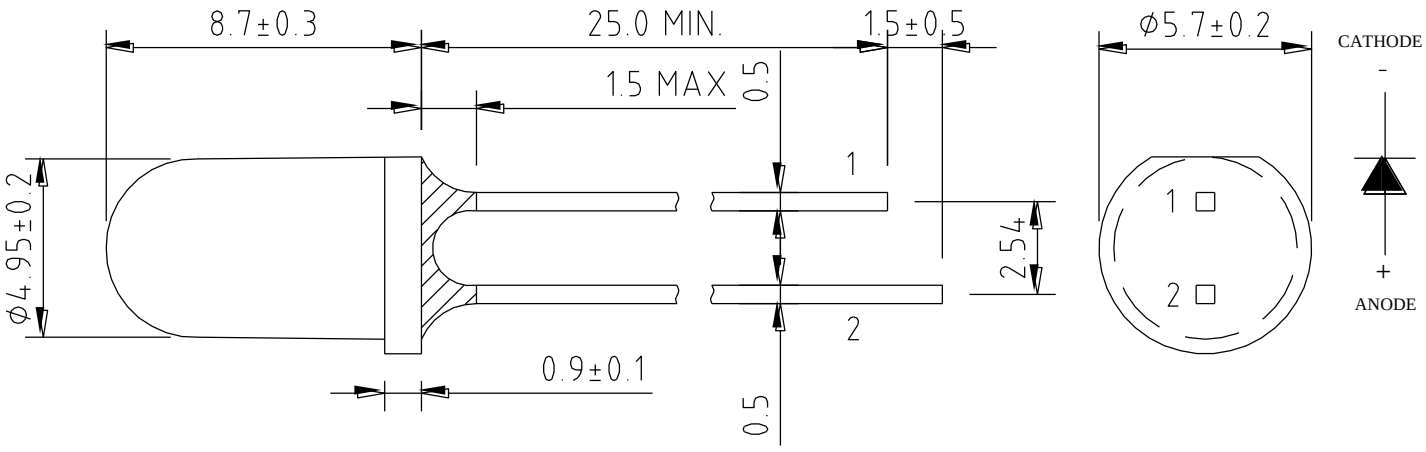
Peak emission wavelength Measurement allowance is ±1nm

4.DIMENSIONS UNIT： m/m

Tolerance is ±0.25mm unless otherwise specified.

SIGN： 1.CATHODE

2.ANODE



Model：RT5-2387E10TBTK

5.BIN

Category Code					
(1)			(2)		
Radiant intensity			Forward voltage		
Ie (IF=50mA)			VF (IF=100mA)		
BIN. CODE	Minimum	Maximum	BIN. CODE	Minimum	Maximum
A	1.00	1.40	1	1.00	1.10
B	1.40	1.96	2	1.10	1.20
C	1.96	2.75	3	1.20	1.30
D	2.75	3.85	4	1.30	1.40
E	3.85	5.39	5	1.40	1.50
F	5.39	7.55	6	1.50	1.60
G	7.55	10.57	7	1.60	1.70
H	10.57	14.80	8	1.70	1.80
I	14.80	20.72	9	1.80	1.90
J	20.72	29.00	10	1.90	2.00
K	29.00	40.60	11	2.00	2.10
L	40.60	56.84	12	2.10	2.20
M	56.84	79.58	13	2.20	2.30
N	79.58	111.40	14	2.30	2.40
O	111.40	155.96	15	2.40	2.50
P	155.96	218.40			
Q	218.40	305.76			
R	305.76	428.06			
S	428.06	599.34			
T	599.34	839.08			
U	839.08	1174.74			

＊Radiant Intensity

Measurement allowance is ±15%

＊Forward voltage

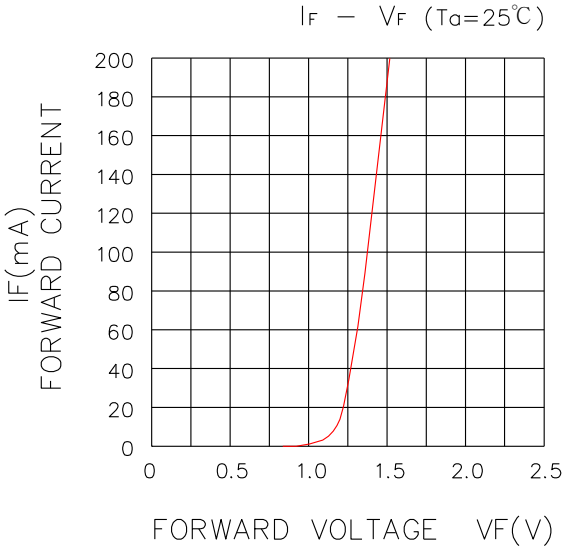
Measurement allowance is ±0.05V

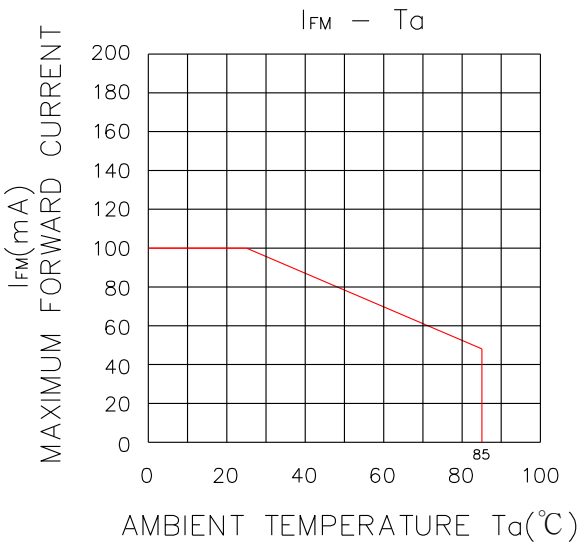
BIN.別標示如下：

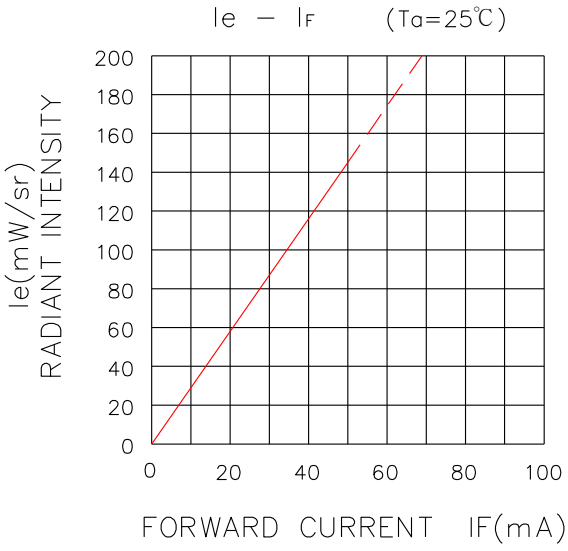
RODAN (TAIWAN) LED.

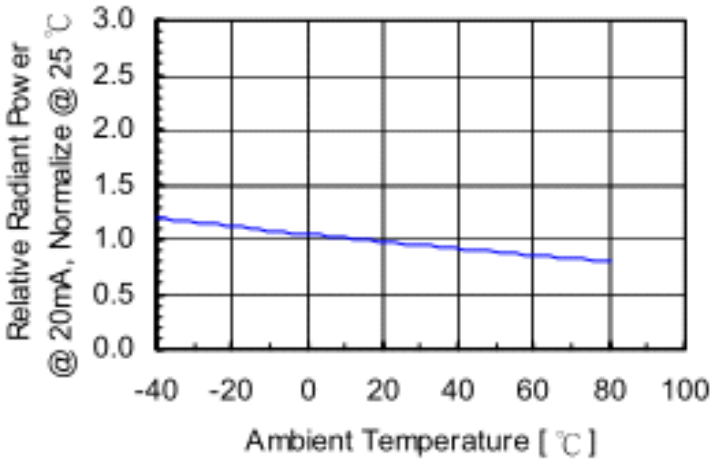
TYPE	
LOT. NO.	
QUANTITY	
DATE	
NOTE	Ie____ VF____

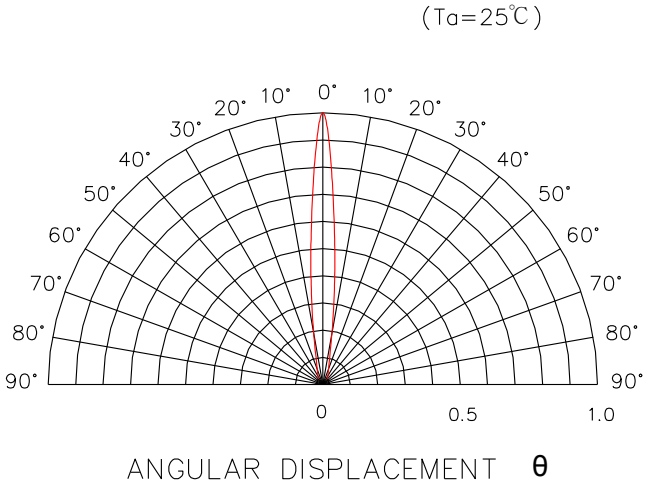
Model：RT5-2387E10TBTK

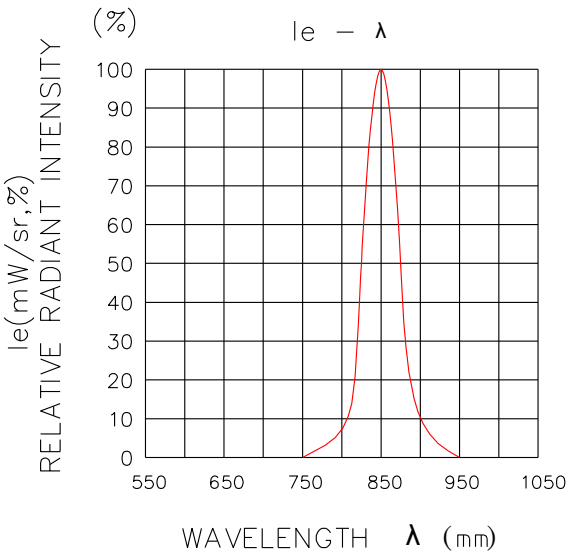












Soldering Profile

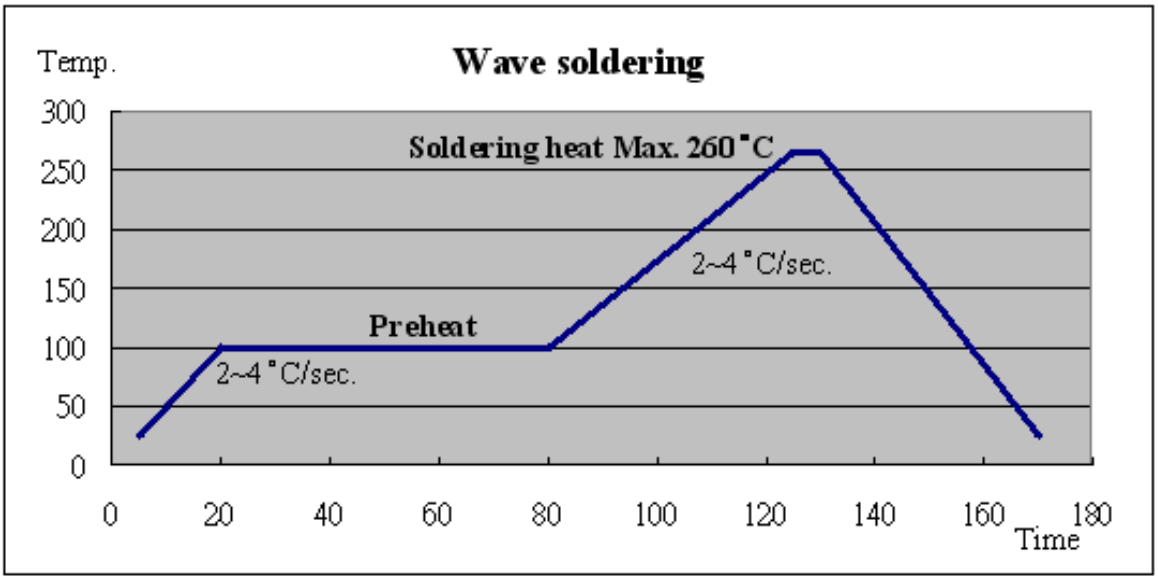
Compliant with the following condition :

(1) Leaded quantity of product below 100 ppm

(2) Lead-free process

Shape	Lead Frame Type / Holder Type
Hand soldering	1.Temp.at tip of iron : 400 ℃ MAX (30W MAX). 2.Soldering time : 3 sec MAX. 3.Distance : 3 mm MIN (from solder joint to case)
DIP soldering	1.Preheat temp : 100 ℃ MAX , 60 sec MAX. 2.Bath temp : 260 ℃ MAX. 3.Bath time : 5 sec MAX. 4.Distance : 3 mm MIN (From solder joint to case).
Reflow soldering	NO
Shape	**SMD Type**
Hand soldering	1.Temp.at tip of iron : 350 ℃ MAX (30W MAX). 2.Soldering time : 3 sec MAX.
DIP soldering	1.Preheat temp. : 120-150 ℃ , 60-120 sec. 2.Bath temp. : 260 ℃ MAX. 3.Bath time : 5 sec
Reflow soldering	1.Preheat temp. : 150-180 ℃ , 120 sec MAX. 2.Peak temp. : 260 ℃ MAX. 3.Peak time : 10 sec MAX.

Lamp wave soldering profile :



Reliability Test Items

CONDITIONS：

The reliability of products shall be satisfied with items listed below.

NO.	Item	Condition	Time / Cycle	Criteria	Ac / Re	Sample Quantity
1	Soldering Heat Test	260°C	5 sec	Open / Shot	0 / 1	60 pcs
2	Thermal Shock	0℃(5min) ~100℃(5min)	20 Cycles	Open / Shot	0 / 1	60 pcs
3	High Temp. Storage	100℃	1000 Hrs	Open / Shot	0 / 1	60 pcs
4	Low Temp. Storage	-40℃	1000 Hrs	Open / Shot	0 / 1	60 pcs
5	Temperature Cycle Test	-40℃~85℃	100 Cycles , 200Hrs	Open / Shot	0 / 1	60 pcs
6	High Temp. High Humidity Test	60℃, 90% RH	1000Hrs	Open / Shot	0 / 1	60 pcs
7	DC Operation Life Test	Room Temp. @IR850nm	1000Hrs	Power decay	≦30%	60 pcs