HVS-3433EES

3433 PLCC6 / Products Series

ن گ ل ل ل نمي

High luminous efficiency, consistency, stability and reliability, it is mainly used in automobile applications.

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- PPA ي أ ث
- 50% I_V 120 °
- 630nm
- نج AEC-Q102 & IEC 60810 ل

Features

- Package Colorless clear silicone in white PPA cup
- Viewing angle at 50% I_V: 120 °
- Color: Super Red (630nm)
- Qualifications: Passed reliability test per AEC-Q102 & IEC 60810 requirement

Applications

-
- نمي ث
- Signaling
- Interior and exterior lighting for automotive

٨ / Ordering Information

Type	Luminous Intensity I_V @ I_f=140mA	Ordering Code
HVS-3433EES- XXXX - X - XXXX Brightness / Color / Forward Voltage	2.80 -7.10 cd	XXXXXX

■
4
HVS-3433EES-CADB-X-XXXX CA CB DA DB

■
4

■
4
HVS-3433EES-XXXX-X-3A4B 3A 3B 4A 4B

Note

■ Brightness Grouping

Only one brightness group will be packed in each reel. Please refer to page #4 for details.

E.g.: HVS-3433EES-CADB-X-XXXX, means only one bin of CA, CB, DA or DB is in each reel.

■ Color Groups

Please refer to page #4 for details.

■ Forward Voltage Groups

Only one forward voltage group will be packed in each reel. Please refer to page #4 for details.

E.g.: HVS-3433EES-XXXX-X-3A4B, means only one bin of 3A, 3B, 4A or 4B is in each reel.

ئى ڭ / Maximum Ratings

ا / Characteristics (T_s = 25 ; I_f = 140 mA)

Parameters ڭ		Symbol	Rating ڭ	Unit
صلى / Wavelength at Peak Emission	typ.	$_{peak}$	642	nm
	min.	$_{dom}$	627	nm
صلى / Dominant Wavelength	typ.	$_{dom}$	630	nm
	max.	$_{dom}$	639	nm

صلى / Spectral Bandwidth at/MC.1 Tm04E70E0908150001-11001040001 TJ(max.) TJETBT5Fi8

بم / Brightness Grouping(T_s = 25 ; I_f = 140 mA)

خى بم Grouping	Luminous Intensity I_V min.	Luminous Intensity I_V max.	Luminous Flux $_V$ typ.
CA	2.80 cd	3.55 cd	9.50 lm
CB	3.55 cd	4.50 cd	12.10 lm
DA	4.50 cd	5.60 cd	15.20 lm
DB	5.60 cd	7.10 cd	19.10 lm

عي بم / Forward Voltage Grouping (T_s = 25 ; I_f = 140 mA)

خى بم Grouping	عي Forward Voltage V_f min.	عي Forward Voltage V_f max.
3A	1.90 V	2.05 V
3B	2.05 V	2.20 V
4A	2.20 V	2.35 V
4B	2.35 V	2.50 V

صلى بم / Dominant Wavelength Grouping (T_s = 25 ; I_f = 140 mA)

خى بم Grouping	صلى Dominant Wavelength $_{dom}$ min.	صلى Dominant Wavelength $_{dom}$ max.
1	627 nm	639 nm

ﻚ ﻢ / Information on Label

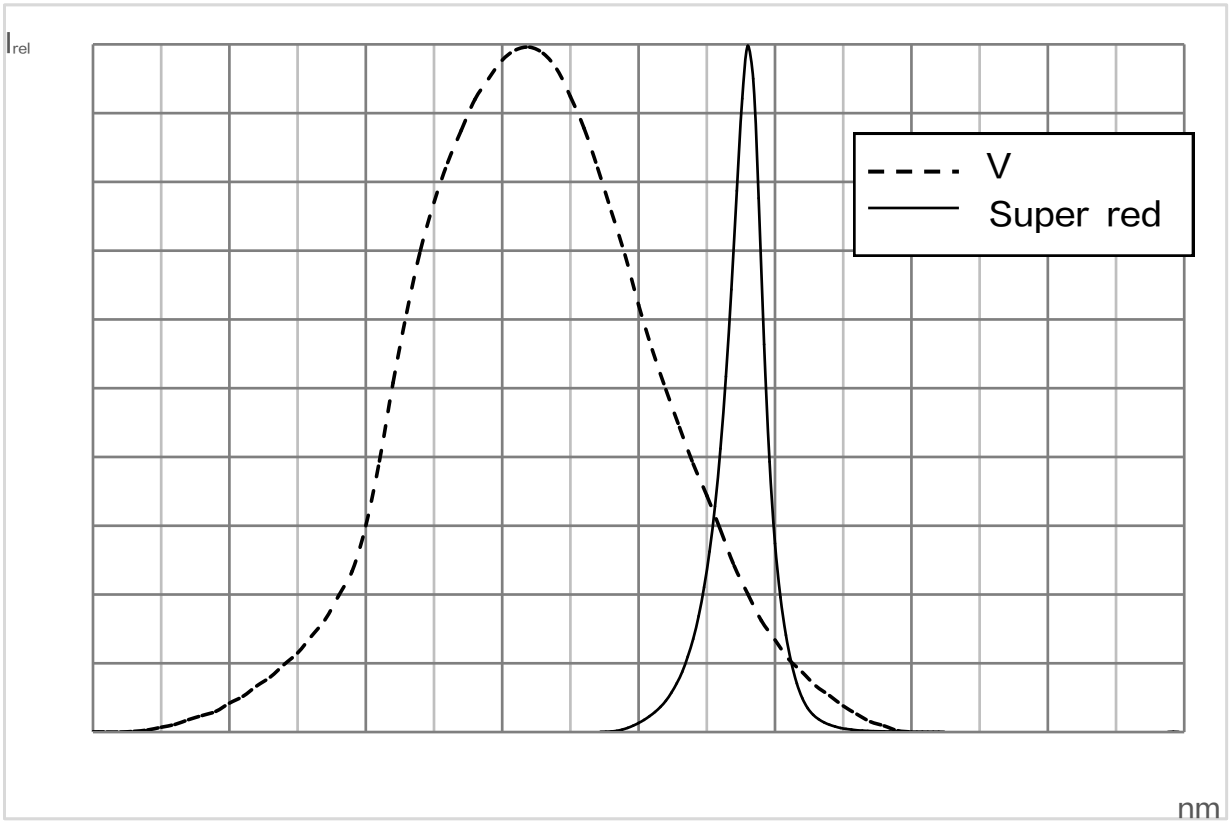
/ E.g. DA-1-3A

ﻢ / Brightness	/ Color	ﻲﻋ / Forward Voltage
DA	1	3A

- V( ) = ﻚ ﺲ

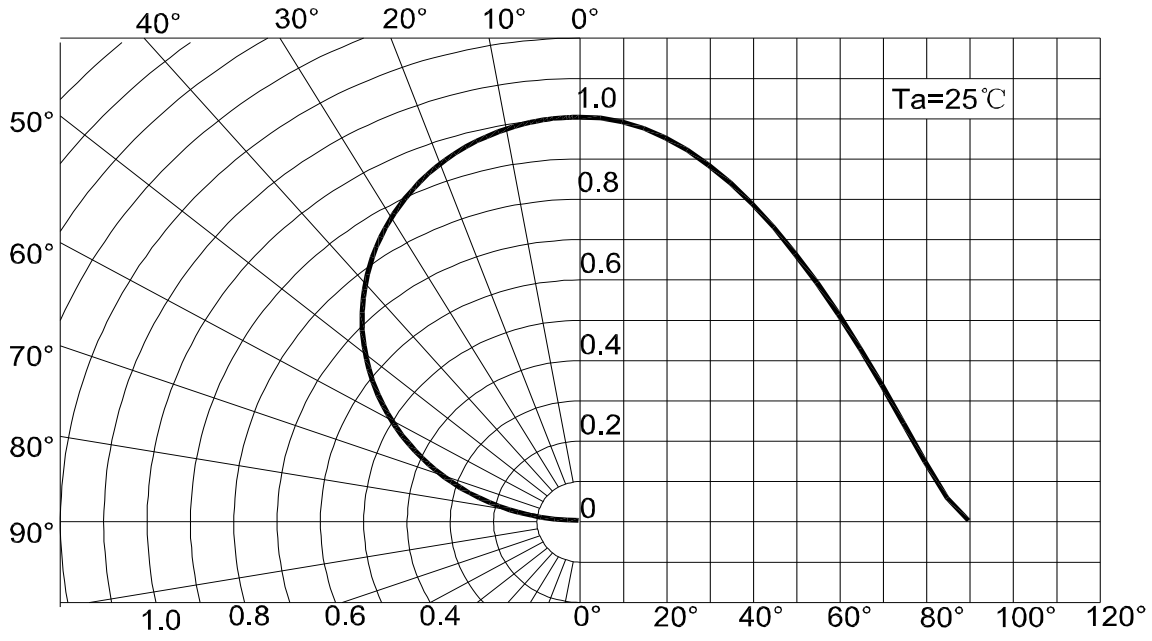
Relative Spectral Emission - V( ) = Standard Eye Response Curve

I_{rel} = f ( ); T_s = 25 ; I_f = 140 mA



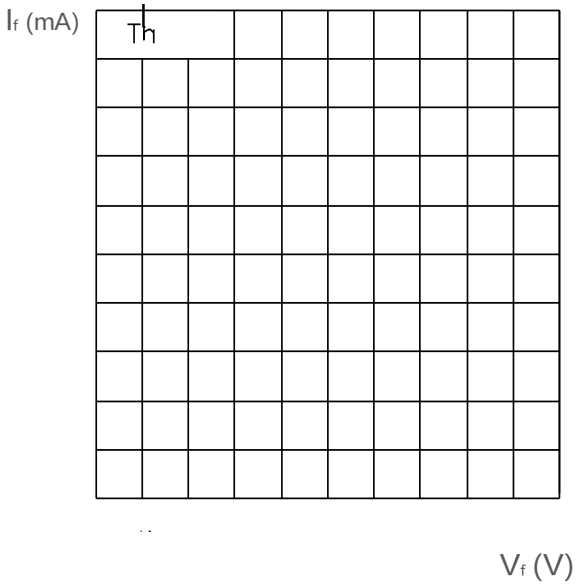
١ / Radiation Characteristics

$I_{rel} = f$ ($T_s = 25$



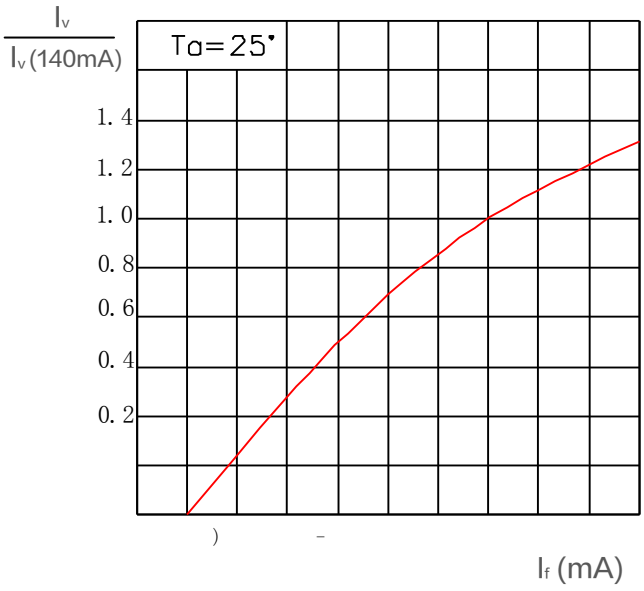
معي / Forward Current

$I_f = f(V_f)$; $T_a = 25$



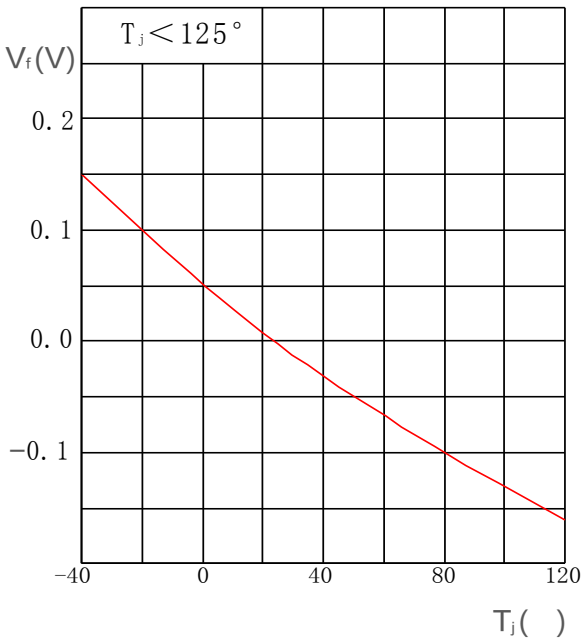
١ ٤ / Relative Luminous Intensity

$I_v / I_v(140\ mA) = f(I_f)$; $T_a = 25$



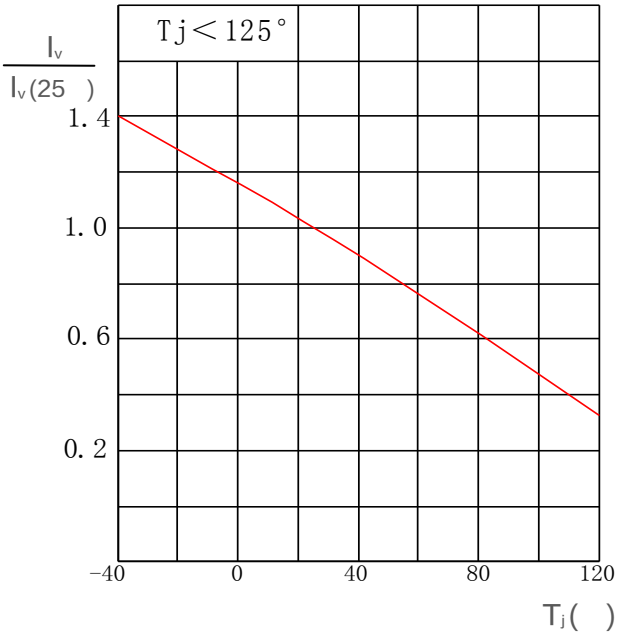
/ Relative Forward Voltage

$V_f = V_f - V_f(25\ ) = f(T_j)$; $I_f = 140$ mA



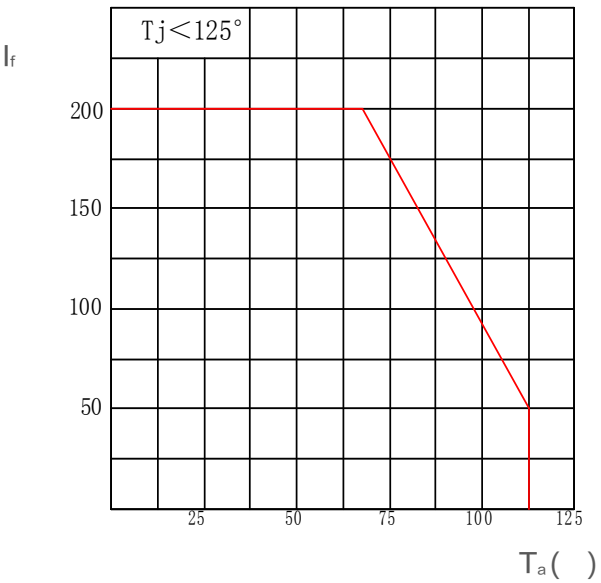
/ Relative Luminous Intensity

$I_v / I_v(25\ ) = f(T_j)$; $I_f = 140$ mA



Ambient Temperature vs. Forward Current

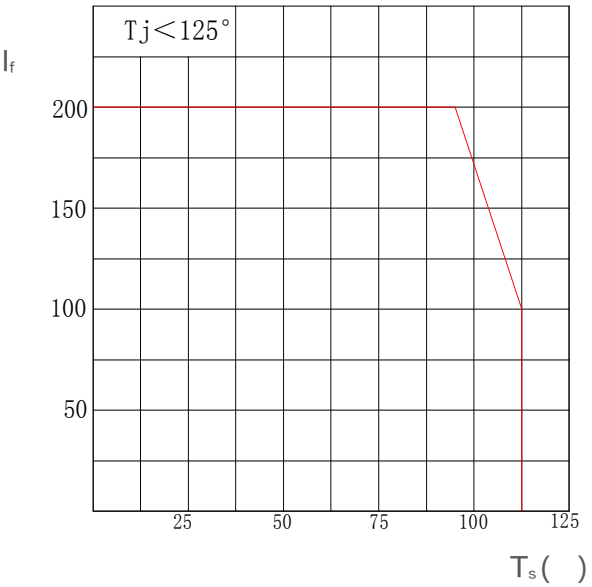
$I_f = f(T_a)$



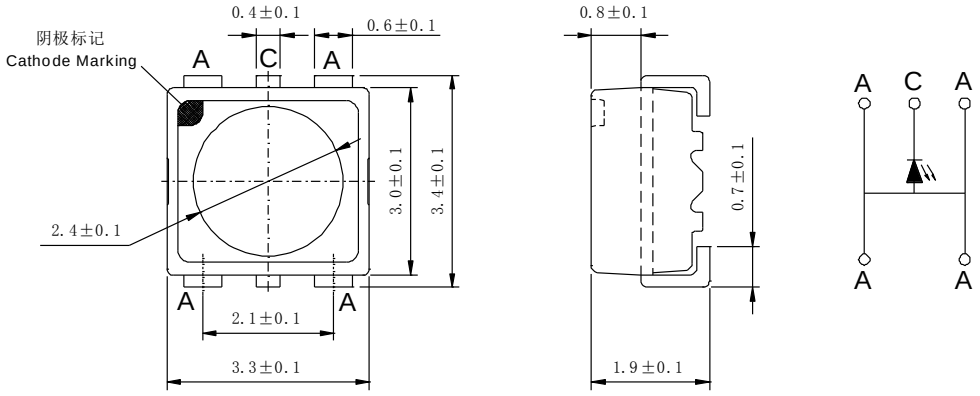
/ Solder Point Temperature

vs. Forward Current

$I_f = f(T_s)$



/ Package Outline



- 40mg
- ا ئى
- Class 3B

: 1) H_2S 40 / 90%R.H, 15ppm, 336 ب (ا IEC 60068-2-43)

2) صد : 25 / 75 %R.H, 500 ب

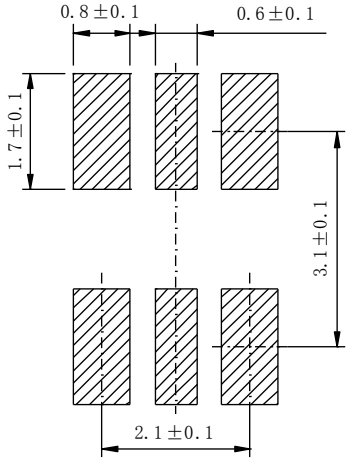
(ا IEC 60068-2-60 ـ لله 4: 10ppb H_2S, 200ppb SO_2, 200ppb NO_2, 10ppb Cl_2)

NOTE

- Approximate Weight: 40mg
- Mark: Cathode
- Corrosion test: Class 3B

Test conditions: 1) H2S test 40 / 90%R.H, 15ppm, 336hours
(Standards IEC 60068-2-43)
2) Flowing mixed gas test: 25 / 75 %R.H, 500hours
(Standards IEC 60068-2-60 test method 4: 10ppb H_2S, 200ppb SO_2, 200ppb NO_2, 10ppb Cl_2)

غ / Recommended Solder Pad



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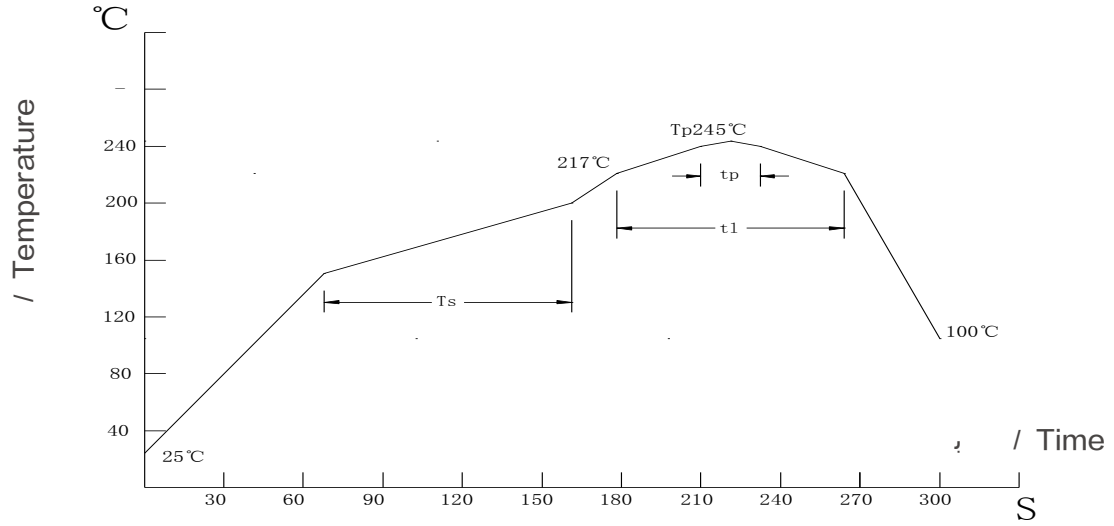
NOTE

- Package not suitable for ultrasonic cleaning

فمم / Reflow Soldering Profile



Profile Feature	Symbol	Pb-Free (SnAgCu) Assembly			Unit
		min.	rec.	max.	
Ramp-up Rate to Preheat 25 -150	-	-	2	3	/s
/ Time T_{smin} to T_{smax}	T_s	60	100	120	s
Ramp-up Rate to Peak T_{smax} to T_p	-	-	2	3	/s
Liquidus Temperature	T_l		217		
Time above Liquidus Temperature	t_l	-	80	100	s
/ Peak Temperature	T_p	-	245	260	
Time within 5 of the Specified Peak Temperature	t_p	10	20	30	s
/ Ramp-down Rate T_p to 100	-	-	3	6	/s
/ Time 25 to T_p	-	-	-	480	s

/ Tape and Reel

/ Tape Dimensions mm

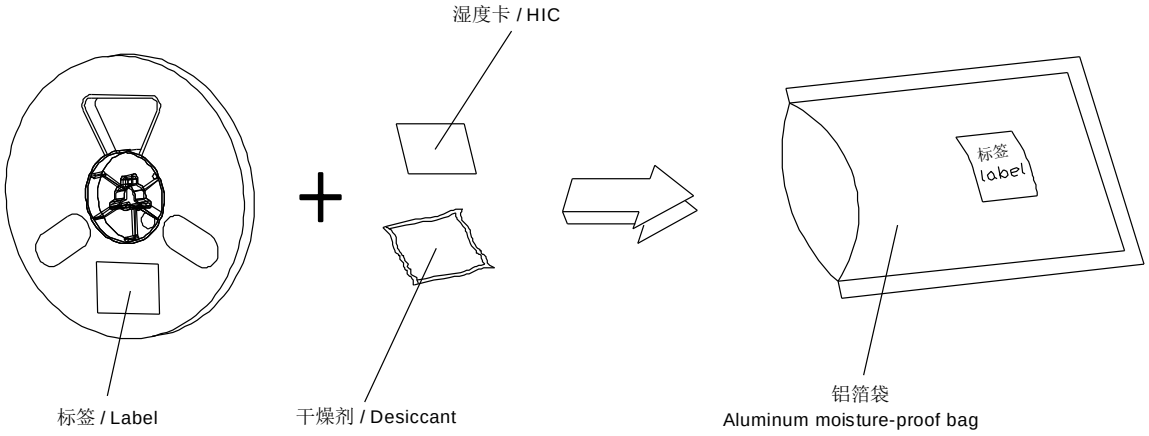
W	P0	P1	P2	D0	E	F
8 ± 0.1	4 ± 0.1	4 ± 0.1	2 ± 0.05	1.5 ± 0.1	1.75 ± 0.1	3.5 ± 0.05

/ Reel Dimensions mm

A	W1	W2	N	R
177.8				

/ Barcode-Product-Label (BPL)

/ Dry Packing Process and Materials

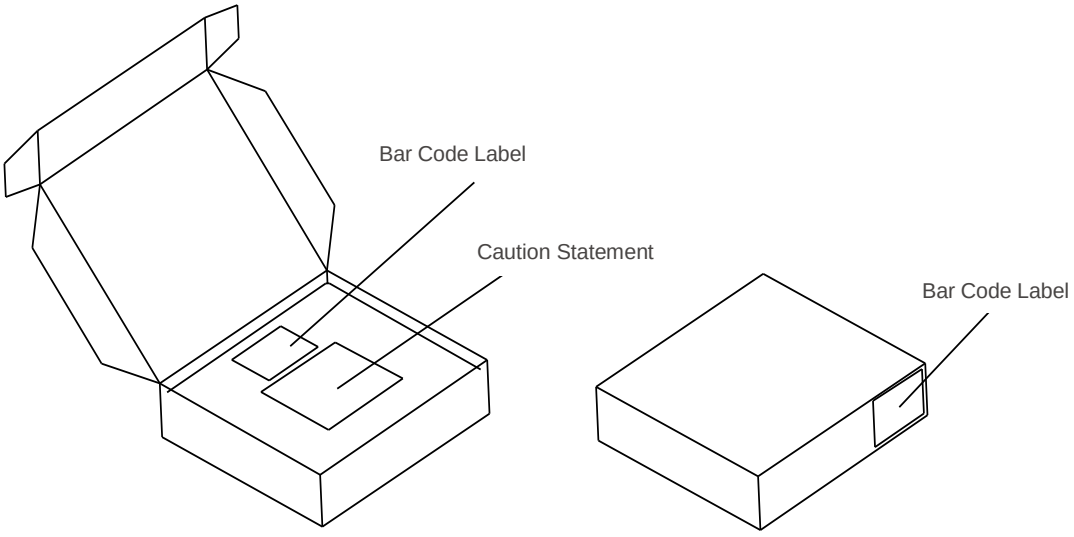


JEDEC

NOTE

Moisture-sensitive product is packed in a dry bag containing desiccant and HIC (humidity indicator card). Regarding dry pack you may find further information in the internet or JEDEC.

ء ي / Transportation Packing and Materials



/ Dimensions of Transportation Box (mm)

/ Width	/ Length	/ Height
256 ± 5	223 ± 5	62 ± 5
256 ± 5	223 ± 5	124 ± 5

: شحـ
: ن ث, ± 0.1 mm
عي عي خ 8ms ١ ± 0.05V ± 0.1V ١
ـً GUM K=3 ثا
طلى طلى خ 25ms ١ ± 0.5nm ± 1nm ١
ـً GUM K=3 ثا
خ 25ms ١ ± 8% ± 11% ١
ـً GUM K=3 ثا

ض ث لآ لآ ـه .. لحيظ ٥ؤ ١ س ب ؤ

Glossary

Typical Values: Actual values of each product may differ from these statistical values .
Tolerance of Measure: Unless otherwise noted in drawing, tolerances are specified with +/ −0.1mm.
Forward Voltage: The forward voltage is measured during a current pulse of typically 8 ms, with an internal reproducibility of ± 0.05 V and an expanded uncertainty of ± 0.1 V (acc. to GUM with a coverage factor of k = 3).
Wavelength: The wavelength is measured at a current pulse of typically 25 ms, with an internal reproducibility of ± 0.5 nm and an expanded uncertainty of ± 1 nm (acc. to GUM with a coverage factor of k = 3).
Brightness: Brightness values are measured during a current pulse of typically 25 ms, with an internal reproducibility of ± 8% and an expanded uncertainty of ± 11% (acc. to GUM with a coverage factor of k = 3).

Special Statement: The final interpretation of this specification shall be vested in Honglitronic, in the case of ambiguity, the Chinese version shall prevail.