

HVO-3528DES



3528 PLCC4

Products Series

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

- PPA
- 50% I_v 120
- 606nm
- AEC-Q102 & IEC 60810

Features

- Package Colorless clear silicone in white PPA cup
- Viewing angle at 50% I_v: 120
- Color: Orange (606nm)
- Qualifications: Passed reliability test per AEC-Q102 & IEC 60810 requirement

Applications

- Signaling
- Interior and exterior lighting for automotive

Ordering Information

Type	Luminous Intensity I _v @ I _f =50mA	Ordering Code
HVO-3528DES - XXXX - XX - XXXX Brightness Color Forward Voltage	1.40 - 4.50 cd	XXXXXX

- HVO-3528DES-ABCB-XX-XXXX

4
AB BA BB CA CB
- HVO-3528DES-XXXX-24-XXXX

4
2 3 4
- HVO-3528DES-XXXX-XX-3A4B

4
3A 3B 4A 4B

Note

■ Brightness Grouping

Only one brightness group will be packed in one reel. Please refer to page #4 for details.
E.g.: HVO-3528DES-ABCB-XX-XXXX, means only one bin of AB, BA, BB, CA or CB is in one reel.

■ Color Groups

Only one color group will be packed in one reel. Please refer to page #4 for details.
E.g.: HVO-3528DES-XXXX-24-XXXX, means only one bin of 2, 3 or 4 is in one reel.

■ Forward Voltage Groups

Only one forward voltage group will be packed in one reel. Please refer to page #4 for details.
E.g.: HVO-3528DES-XXXX-XX-3A4B, means only one bin of 3A, 3B, 4A or 4B is in one reel.

Brightness Grouping (T_s $f = 50$ mA)

Grouping	Luminous Intensity I_v min.	Luminous Intensity I_v max.	Luminous Flux Φ_v typ.
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Information on Label

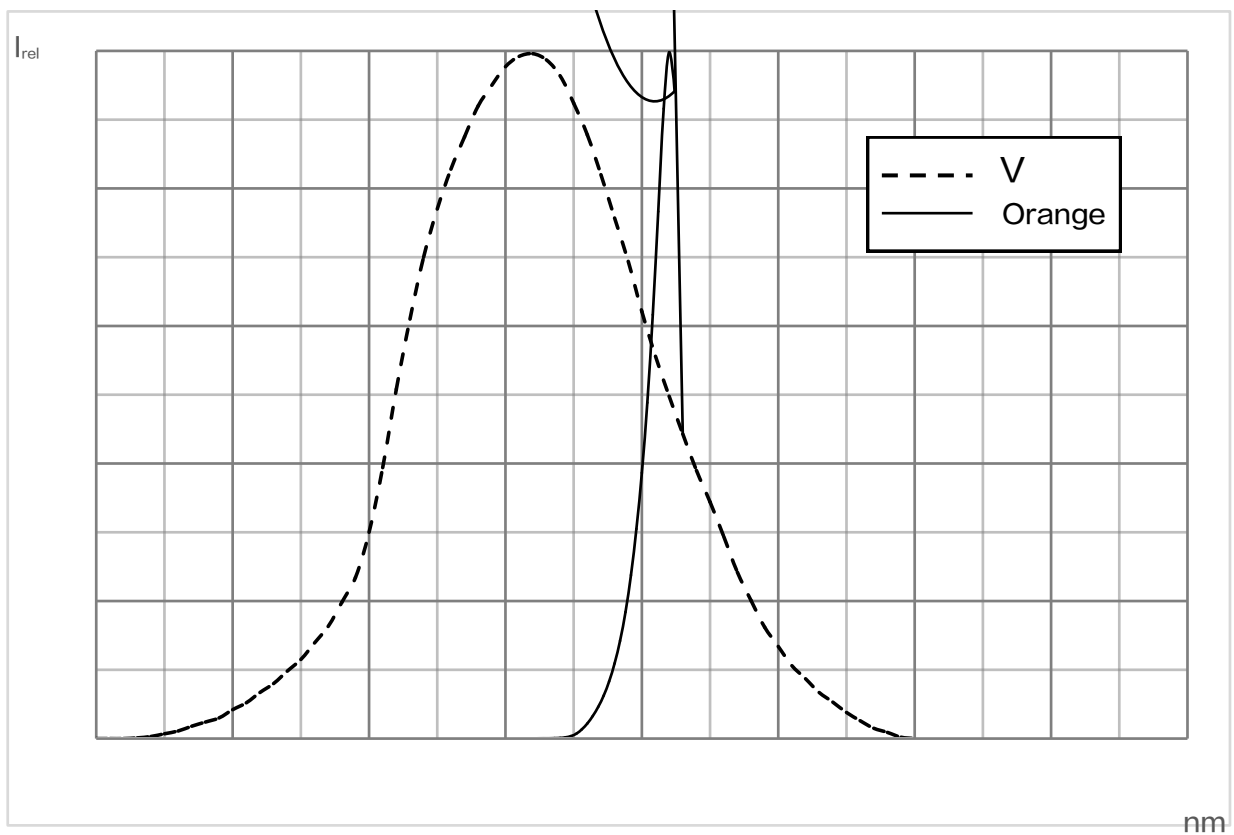
E.g. BA-2-3A

Brightness	Color	Forward Voltage
BA	2	3A

$$- V(\lambda) =$$

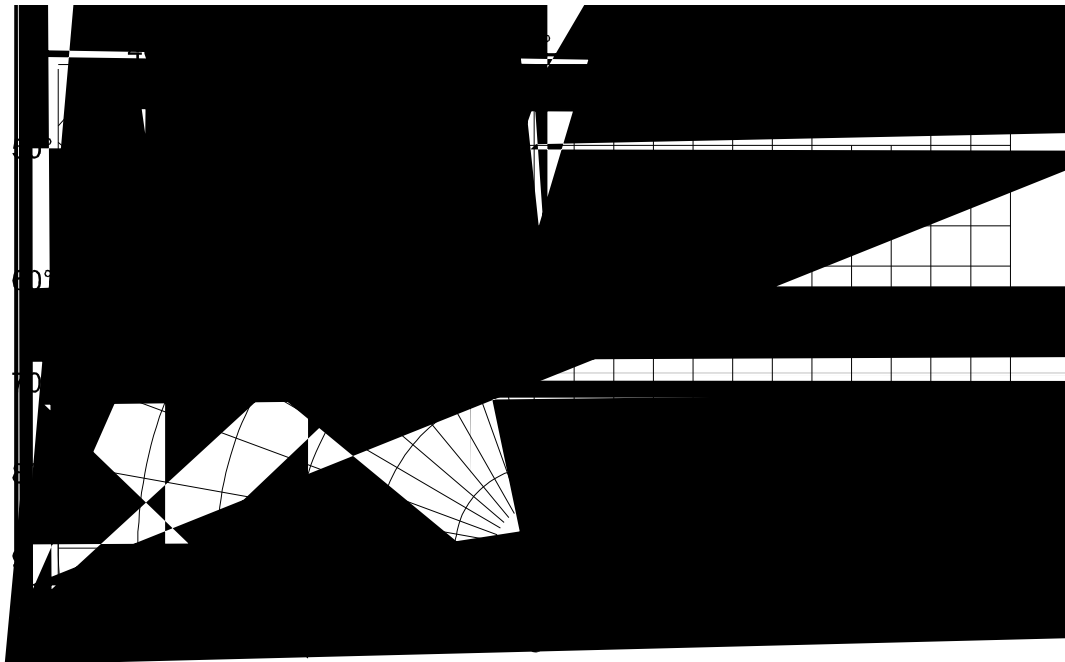
Relative Spectral Emission - $V(\lambda)$ = Standard Eye Response Curve

$$I_{rel} = f(\lambda); T_s \quad I_f = 50 \text{ mA}$$



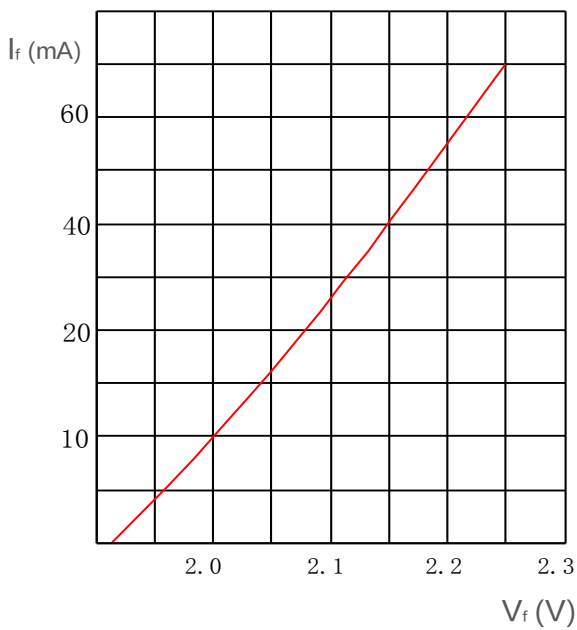
Radiation Characteristics

$I_{rel} = f(\theta) \quad T_s = 25$



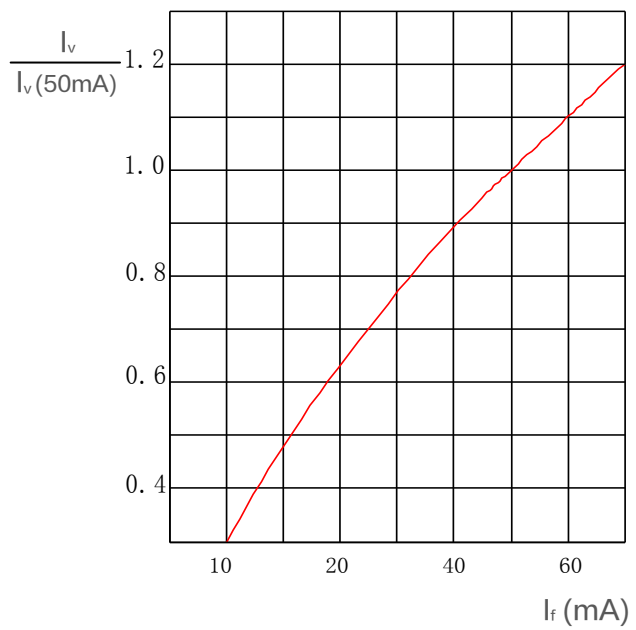
Forward Current

$I_f = f(V_f); T_a$



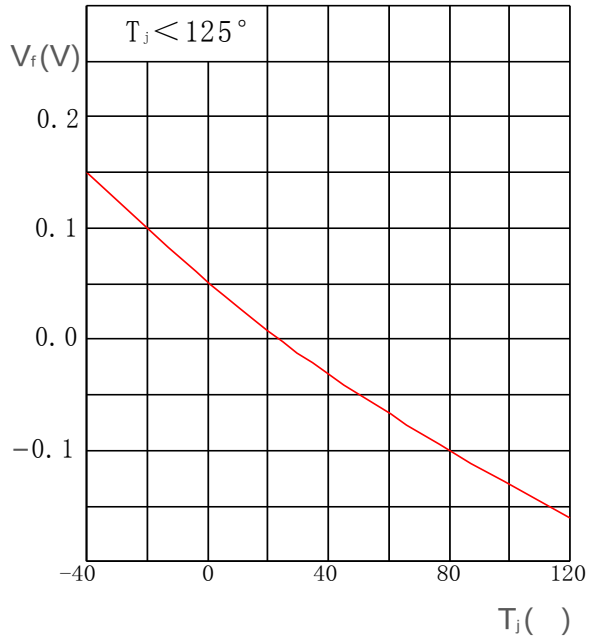
Relative Luminous Intensity

$I_v/I_v(50\text{ mA}) = f(I_f); T_a$



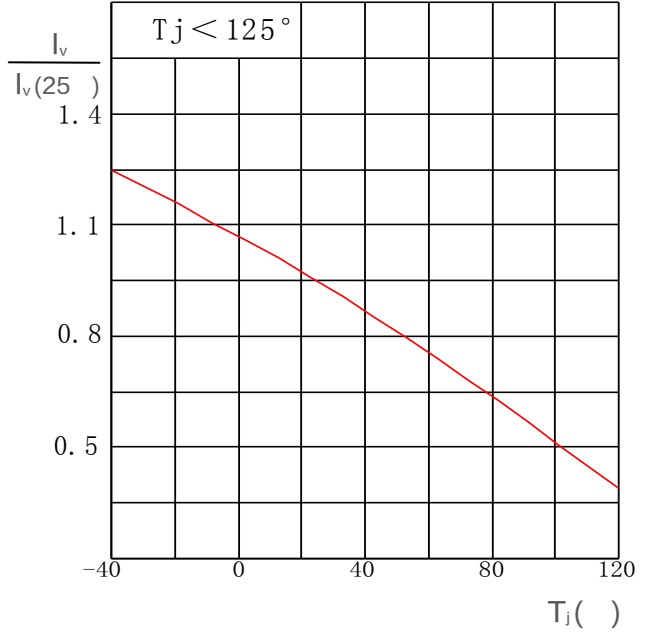
Relative Forward Voltage

$V_f = V_f - V_f$; $I_f = 50 \text{ mA}$



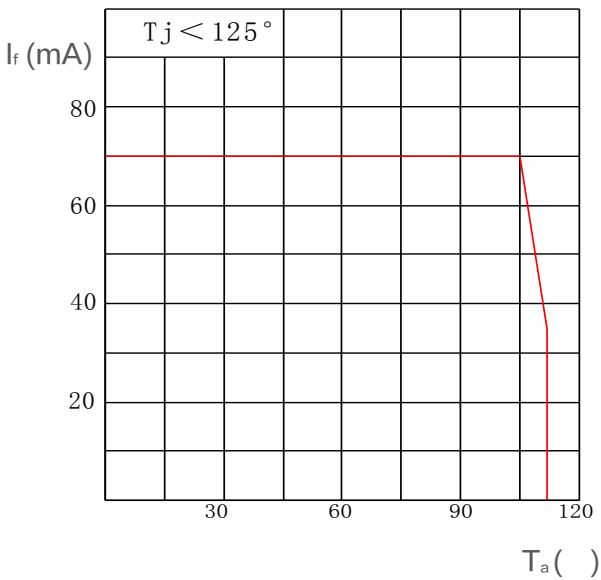
Relative Luminous Intensity

I_v/I_v ; $I_f = 50 \text{ mA}$

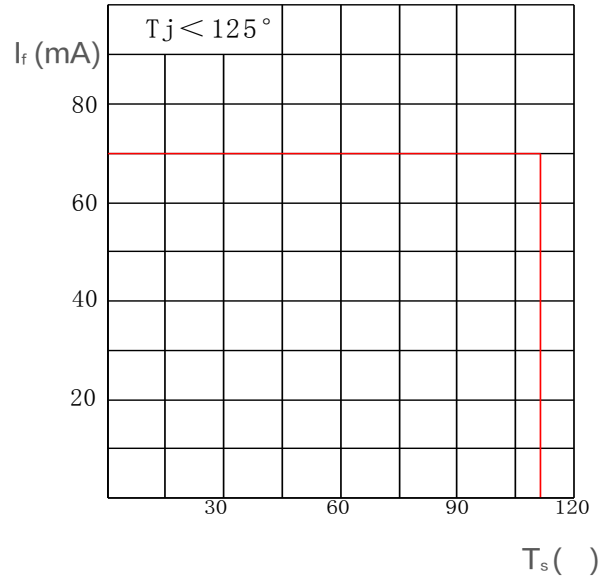


Solder Point Temperature

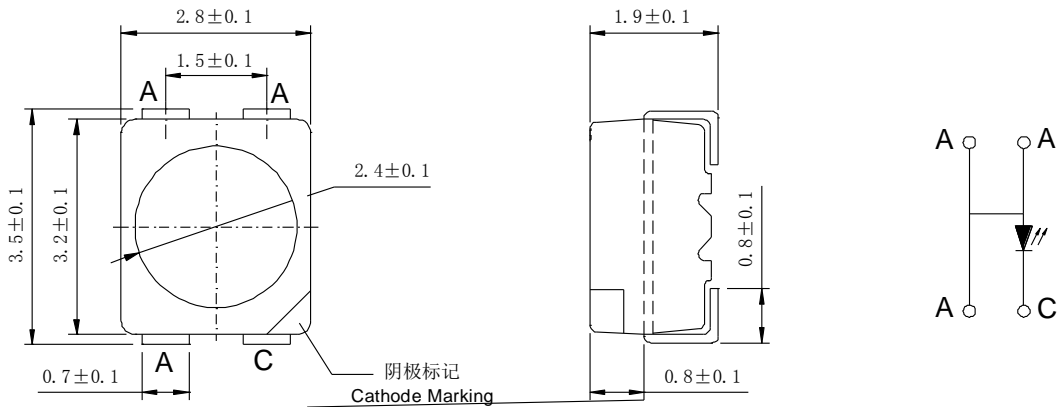
Ambient Temperature vs. Forward Current
 $I_f = f(T_a)$



vs. Forward Current
 $I_f = f(T_s)$



Package Outline

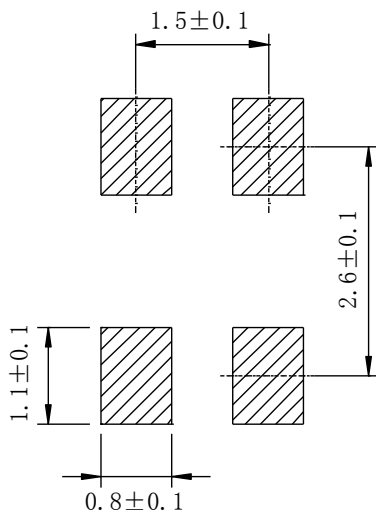


- 30mg
- Class 3B
- : 1) H₂S , 336 IEC 60068-2-43)
- 2) IEC 60068-2-60 4: 10ppb H₂S, 200ppb SO₂, 200ppb NO₂, 10ppb Cl₂)

NOTE

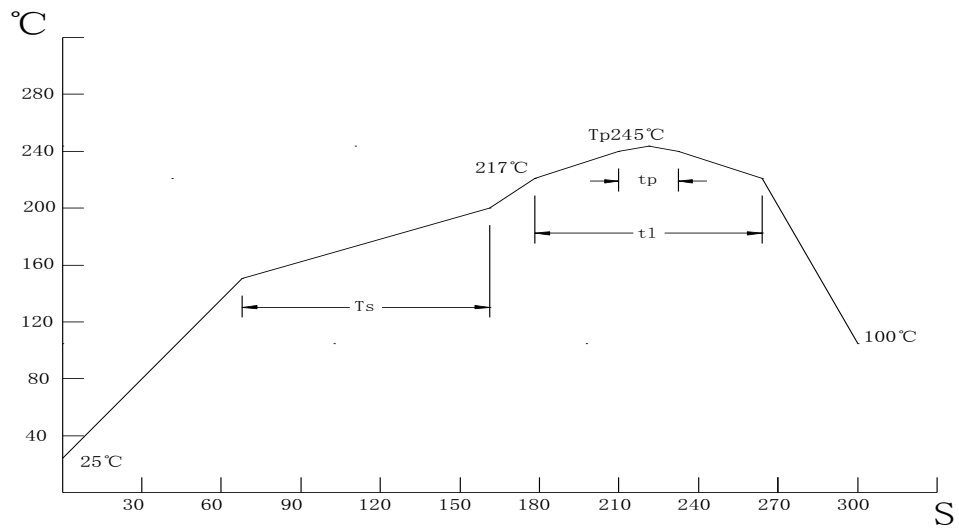
- Approximate Weight: 30mg
- Mark: Cathode
- Corrosion test: Class 3B
- Test conditions: 1) H₂S test , 15ppm, 336hours
(Standards IEC 60068-2-43)
- 2) Flowing
(Standards IEC 60068-2-60 test method 4: 10ppb H₂S, 200ppb SO₂, 200ppb NO₂, 10ppb Cl₂)

Recommended Solder Pad



- NOTE
- Package not suitable for ultrasonic cleaning

Reflow Soldering Profile

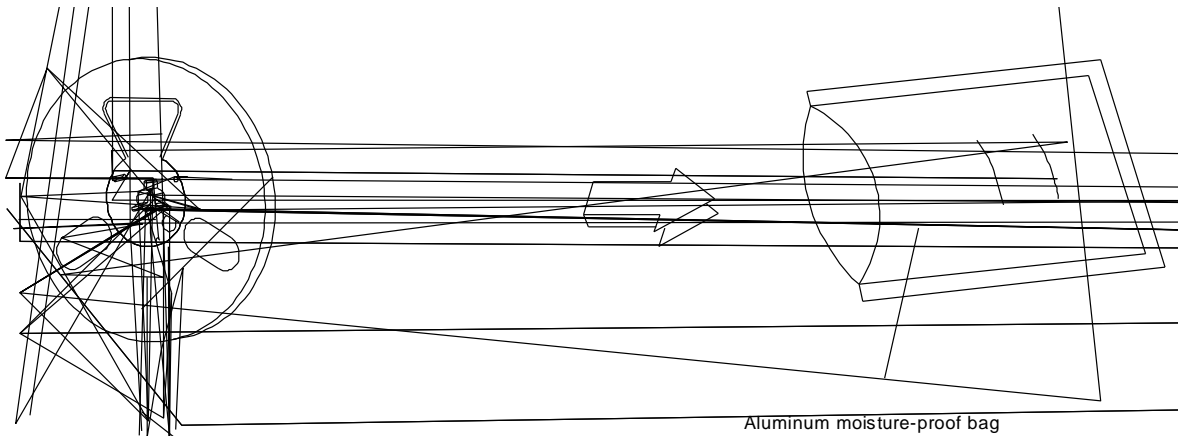


Profile Feature	Symbol	Pb-Free (SnAgCu) Assembly		Unit
		min.	rec.	

Barcode-Product-Label (BPL)



Dry Packing Process and Materials

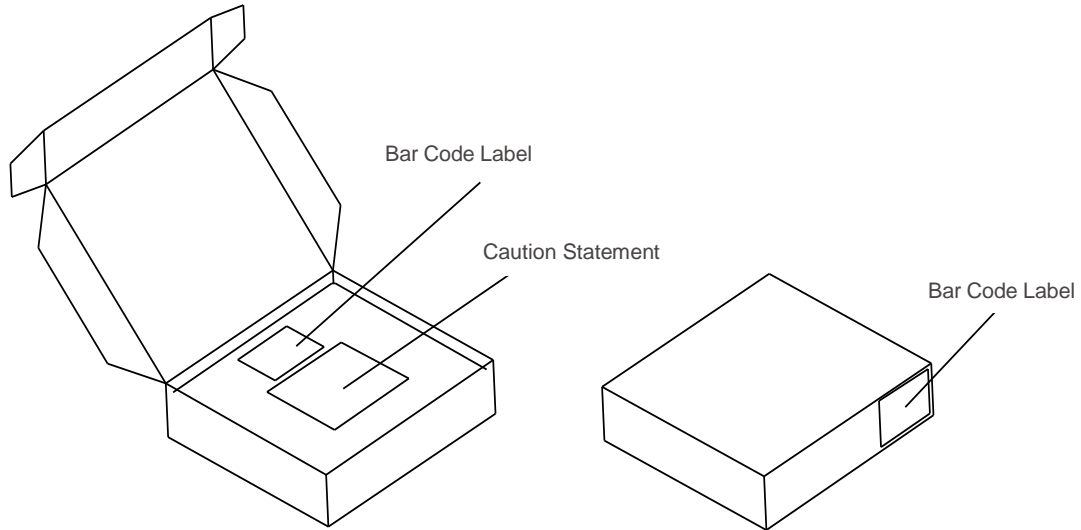


NOTE

JEDEC

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.

Transportation Packing and Materials



Dimensions of Transportation Box (mm)

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

:				
:	,	息		
	8ms		息 0.05V	0.1V
	GUM K=3			
	25ms		息 0.5nm	1nm
	GUM K=3			
	25ms		息 8%	11%
	GUM K=3			
				息

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,

GUM with a coverage factor of k = 3).

Wavelength: The wavelength is measured at a current pulse of typically 25 ms,

GUM with a coverage factor of k = 3).

Brightness: Brightness values are measured during a current pulse of typically 25 ms,

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.