

Process/Engineering Change Notification Form

Please address your comments, if any, to your sales contact or quality assurance manager at Kingbright.

Notification Number:S202609001	Issue Date:2026-09-01
Author:Ziven Ni	Issued By: SMD Technical Dept

Product Types:	Old P/N	New P/N																																										
	APTD1608-MTS73	APTD1608-MTS73																																										
Change Category:	Bin code																																											
Change Description:	Bin code																																											
Reason for Change:	The ZC bin code will be added after this period.																																											
Anticipated impact of change:	The X bin code will be removed, and the ZC bin code will be added after this period.																																											
	<table border="1"><thead><tr><th colspan="3">Before</th><th colspan="3">After</th></tr><tr><th>Code.</th><th>Min.</th><th>Max.</th><th>Code.</th><th>Min.</th><th>Max.</th></tr></thead><tbody><tr><td>X</td><td>1900</td><td>2300</td><td>Y</td><td>2300</td><td>2700</td></tr><tr><td>Y</td><td>2300</td><td>2700</td><td>Z</td><td>2700</td><td>3100</td></tr><tr><td>Z</td><td>2700</td><td>3100</td><td>ZA</td><td>3100</td><td>3600</td></tr><tr><td>ZA</td><td>3100</td><td>3600</td><td>ZB</td><td>3600</td><td>4200</td></tr><tr><td>ZB</td><td>3600</td><td>4200</td><td>ZC</td><td>4200</td><td>5000</td></tr></tbody></table>		Before			After			Code.	Min.	Max.	Code.	Min.	Max.	X	1900	2300	Y	2300	2700	Y	2300	2700	Z	2700	3100	Z	2700	3100	ZA	3100	3600	ZA	3100	3600	ZB	3600	4200	ZB	3600	4200	ZC	4200	5000
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ZB	3600	4200	ZC	4200	5000																																							
Disposition of Old Product:	N/A																																											
Identification of Changed Product:	N/A																																											
Proposed First Ship Date:	October 1, 2026																																											

Approved By: <u>Benson Huang</u>	Title: <u>Sr Quality manager</u>	Date: <u>2026/9/01</u>
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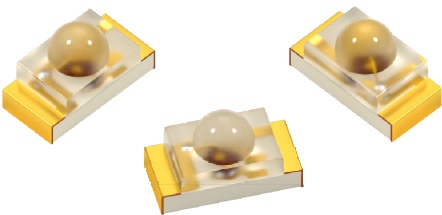
Notification Number:S202609001

Acknowledgement of Receipt of Notice

Company Name: _____

Name(please print): _____ Title: _____

Signature: _____ Date: _____



APTD1608-MTS73
1.6 x 0.8 mm SMD Chip LED Lamp

DESCRIPTIONS

- The Hyper Red device is based on light emitting diode chip made from AlGaInP
- Electrostatic discharge and power surge could damage the LEDs
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs
- All devices, equipments and machineries must be electrically grounded

FEATURES

- 1.6 mm x 0.8 mm SMD LED, 0.95 mm thickness
- Low power consumption
- Ideal for backlight and indicator
- Package: 2000 pcs / reel
- Moisture sensitivity level: 3
- Halogen-free
- RoHS compliant

APPLICATIONS

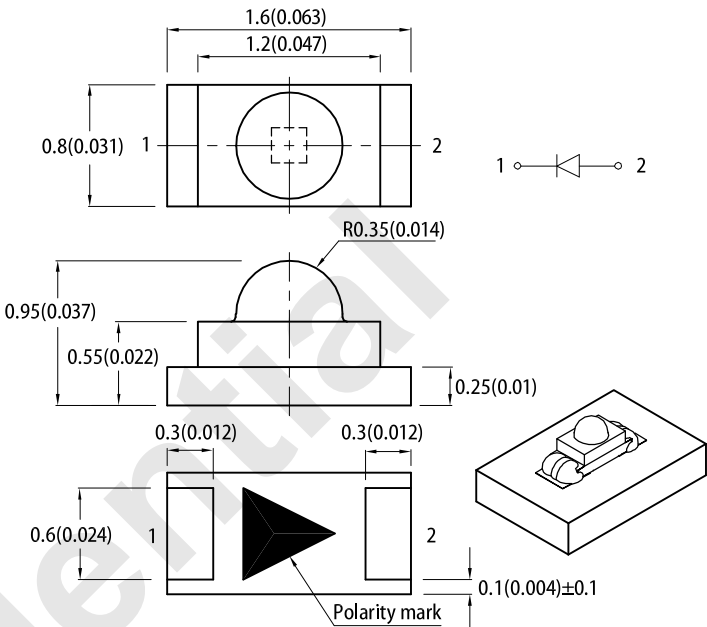
- Backlight
- Status indicator
- Home and smart appliances
- Wearable and portable devices
- Healthcare applications

ATTENTION

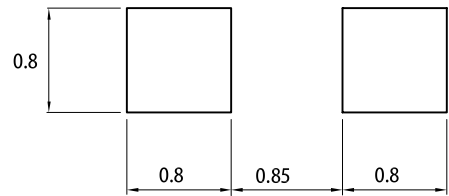
Observe precautions for handling electrostatic discharge sensitive devices



PACKAGE DIMENSIONS



RECOMMENDED SOLDERING PATTERN
(units : mm; tolerance : ± 0.1)



- Notes:
1. All dimensions are in millimeters (inches).
 2. Tolerance is ±0.15(0.006") unless otherwise noted.
 3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
 4. The device has a single mounting surface. The device must be mounted according to the specifications.

SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 20mA ^[2]			Viewing Angle ^[1]
			Code.	Min.	Max.	2θ1/2
APTD1608-MTS73	■ Hyper Red (AlGaInP)	Water Clear	Y	2300	2700	60°
			Z	2700	3100	
			ZA	3100	3600	
			ZB	3600	4200	
			ZC	4200	5000	

- Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
 2. Luminous intensity / luminous flux: +/-15%.
 3. LEDs will be provided from the listed bin codes. The bins delivered to the customer will be at Kingbright's discretion.

ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I _F = 20mA	λ_{peak}	Hyper Red	640	-	nm
Dominant Wavelength I _F = 20mA	λ_{dom} ^[1]	Hyper Red	625	-	nm
Spectral Bandwidth at 50% Φ REL MAX I _F = 20mA	$\Delta\lambda$	Hyper Red	20	-	nm
Forward Voltage I _F = 20mA	V _F ^[2]	Hyper Red	2.2	2.8	V
Reverse Current (V _R = 5V)	I _R	Hyper Red	-	10	μA
Temperature Coefficient of λ_{peak} I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _{λ_{peak}}	Hyper Red	0.13	-	nm/°C
Temperature Coefficient of λ_{dom} I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _{λ_{dom}}	Hyper Red	0.06	-	nm/°C
Temperature Coefficient of V _F I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _V	Hyper Red	-2.0	-	mV/°C

Notes:

1. The dominant wavelength (λ_d) above is the setup value of the sorting machine. (Tolerance λ_d : ±1nm.)
2. Forward voltage: ±0.1V.
3. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

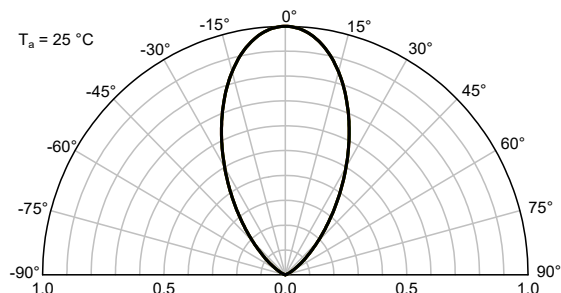
ABSOLUTE MAXIMUM RATINGS at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	84	mW
Reverse Voltage	V _R	5	V
Junction Temperature	T _j	115	°C
Operating Temperature	T _{op}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +85	°C
DC Forward Current	I _F	30	mA
Peak Forward Current	I _{FP} ^[1]	150	mA
Electrostatic Discharge Threshold (HBM)	-	3000	V
Thermal Resistance (Junction / Ambient)	R _{th JA} ^[2]	470	°C/W
Thermal Resistance (Junction / Solder point)	R _{th JS} ^[2]	360	°C/W

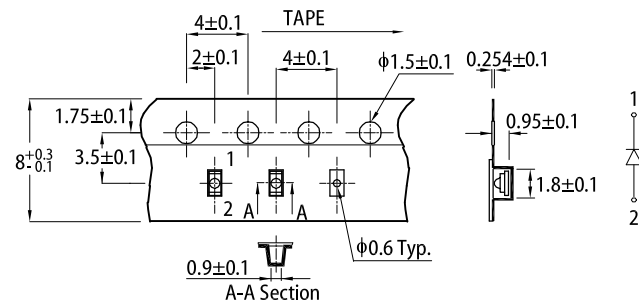
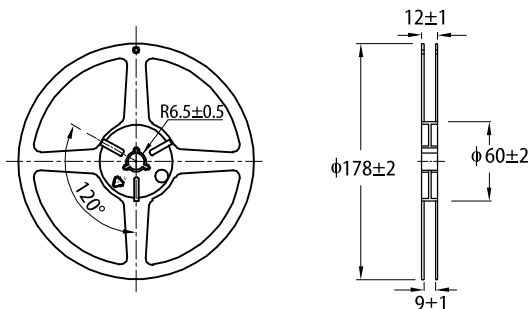
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. R_{th JA}, R_{th JS} Results from mounting on PC board FR4 (pad size ≥ 16 mm² per pad).
3. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

RELATIVE INTENSITY vs. WAVELENGTH

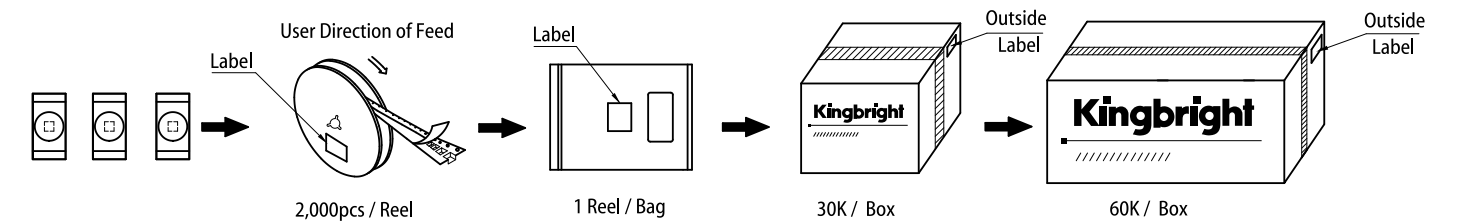


TAPE SPECIFICATIONS (units : mm)

**REEL DIMENSION** (units : mm)

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PACKING & LABEL SPECIFICATIONS



PRECAUTIONARY NOTES

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
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