

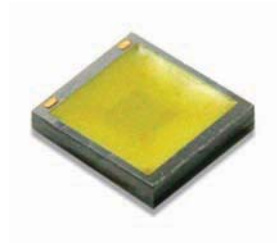


High Brightness LED Emitter

AL-S 4 Watt Series Specifications

LED Product features:

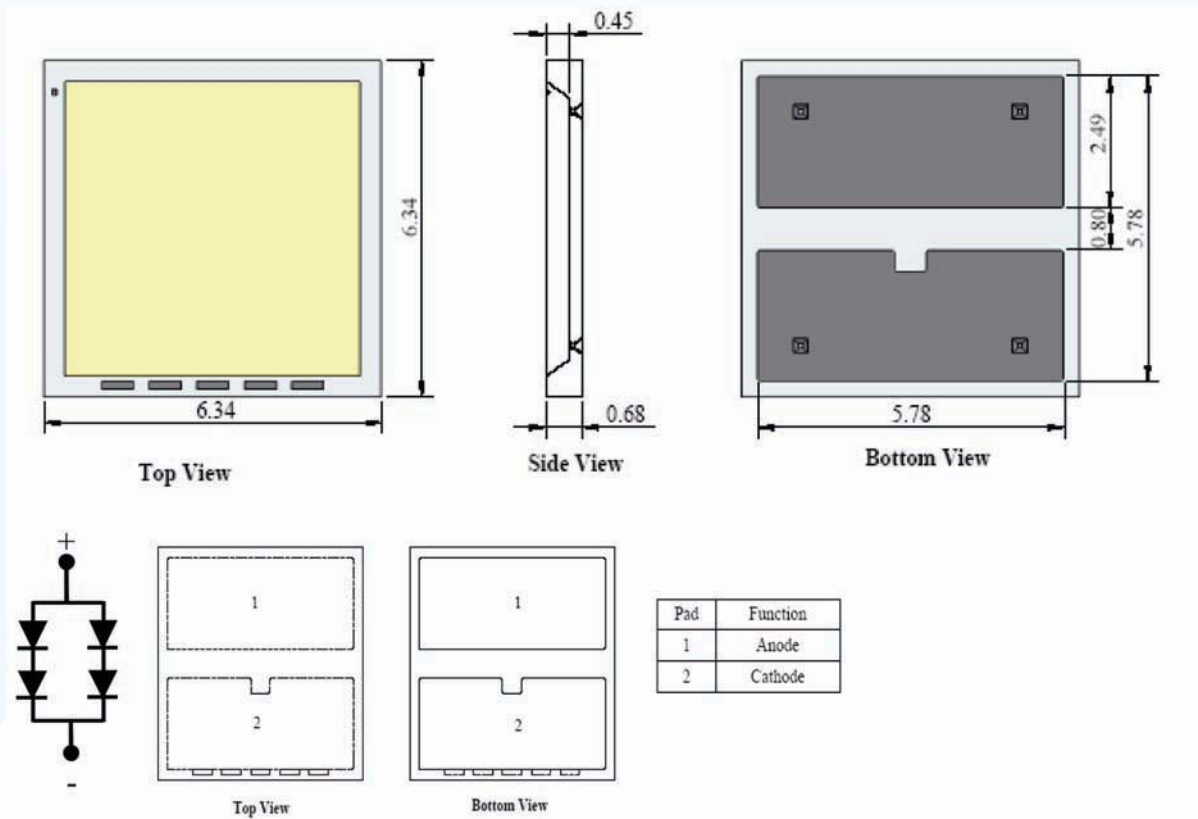
High Efficiency and Reliability
Low Power Consumption
Over 100,000 hour life span



ALTA LED

AL-S Series Specifications

Chip Dimensions



All dimensions are in millimeters (mm).



AL-S Series Specifications

Maximum Ratings at Ta = 25° C

Parameter	Symbol	Rating	Unit
DC Forward Current	If	700	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260±10	°C
Junction Temperature	Tj	120	°C
Peak Forward Current	I _{fp} (Peak) *	1400	mA
Thermal Resistance (Junction to Solder Point)	R _{th}	6.0	K/W
Reverse Voltage	Vr	10	V

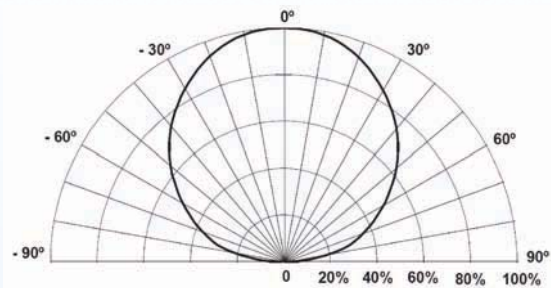
* I_{fp} Conditions – Pulse Width ≤ 1msec / Duty ≤ 1/10.

Forward Voltage and Luminance Ranking

Part Number	Color	Condition If (mA)	CCT Range (K)			Luminous Flux		Forward Voltage (V)		
			Min.	Typ.	Max.	Min.	Max.	Min.	Typ.	Max.
AL-S-4W-50	Cool White	700	5000	-	6500	455	480	5.70	5.90	7.10
AL-S-4W-30	Warm White	700	2850	-	3500	355	380	5.70	5.90	7.10

AL-S Series Specifications

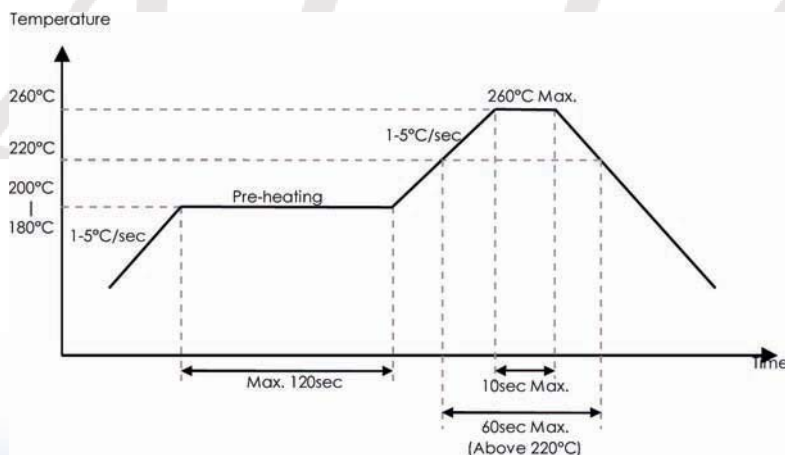
Typical Radiation Pattern



Reliability Test

Test Item	Condition	Note	Standard Test Method
Temperature Cycle Test (TCT)	-40°C ~ 25°C ~ 100°C ~ 25°C 30min 5min 30min 5min	100 Cycles	JEITA ED-4701 100 105
High Temperature Storage	100±5°C	1000 hours	JEDEC22-A103-C
Low Temperature Storage	-40±5°C	1000 hours	JEITA ED-4701 200 202
Wet High Temperature Operating L	80°C, 85% RH	1000 hours	JEDEC-22-A101-B
Operating Life Test	25±5°C, If = max.	1000 hours	
Reflow Soldering	260±5°C	3 times	JEDEC Level 1

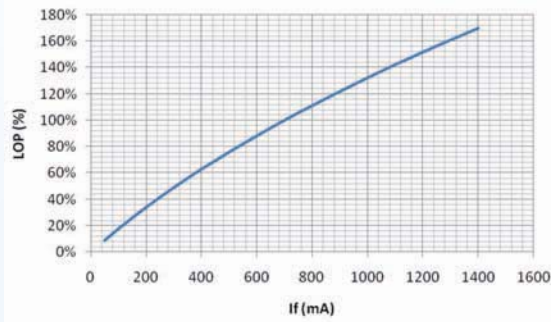
Reflow Profile



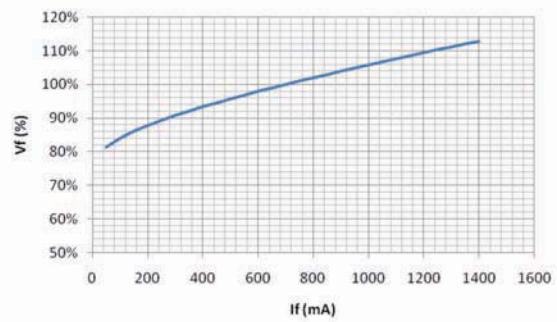
AL-S Series Specifications

Typical Optical and Electrical Curves

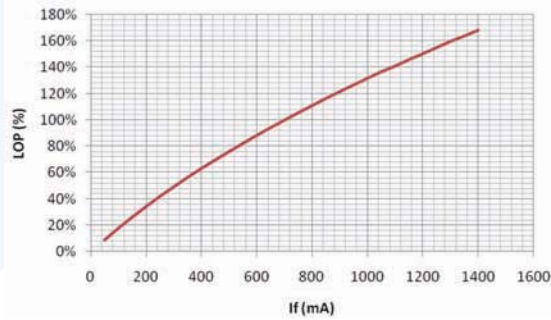
Forward Current & Luminous Flux
Cool White



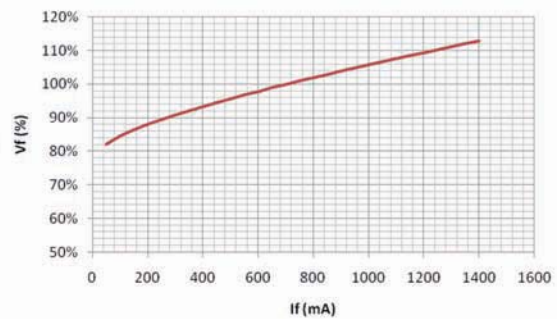
Forward Current & Forward Voltage
Cool White



Warm White

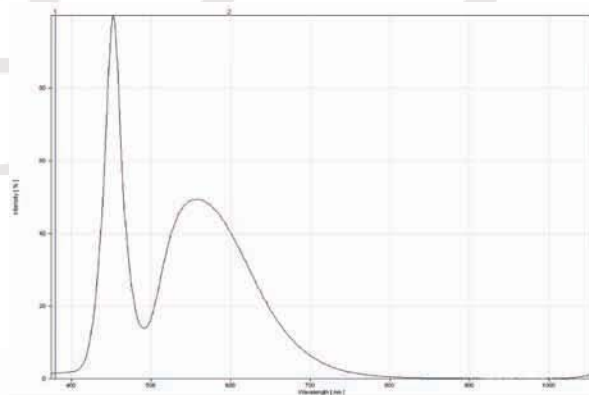


Warm White

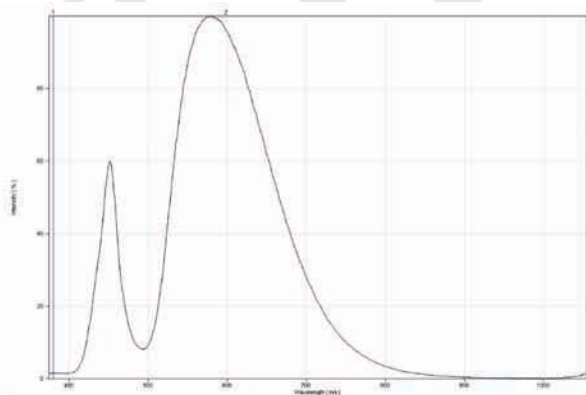


Typical Spectrum

Cool White

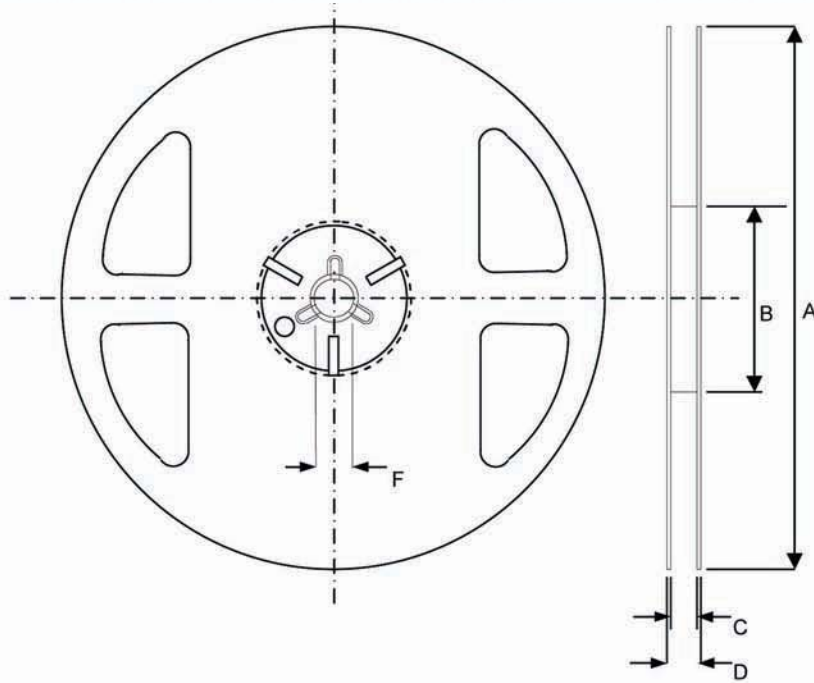


Warm White



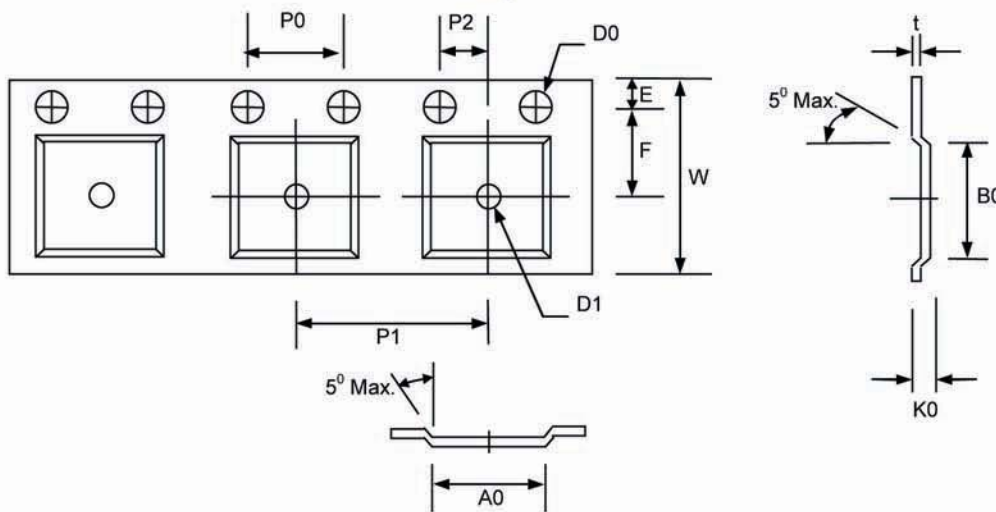
AL-S Series Specifications

Reel Dimensions



	mm
A	180.0 +0 -3
B	60.0 +1 -0
C	13.0 +1 -0
D	15.4 ±1.0
F	13.0 ±0.2

Carrier Tape Dimensions



Item	W	E	F	D0	D1	P0	P1	P2	t	A0	B0	K0
Length (mm)	12.00 +0.30 -0.10	1.75 ±0.10	5.50 ±0.05	1.50 +0.10	1.50 +0.25	4.00 ±0.10	8.00 ±0.10	2.00 ±0.05	0.28 ±0.02	6.50 ±0.05	6.50 ±0.05	0.91 ±0.05

Loaded Quantity: 1,000 Pieces per Reel