



DATA SHEET

ATL120-Y-xxxxxx

LED TYPE ATL 120 Type designation: ATL120-Y-xxxxxx	Color: yellow Chip-Type: AllnGaP Case: water clear
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- Description, Features**

- Yellow light emitting diode
- Ultra-High-Brightness Performance
- High optical precision
- Long lifetime
- Sturdy design

- Typical Applications**

- Automotive Lighting
- Traffic Signals
- Illuminator
- Ultra-High-Brightness Indicator

- Absolute Maximum Ratings**, not to be exceeded at any time

Parameter	Symbol	Min.	Max.	Unit	Condition
Operating Temperature	T_{OP}	-40	120	°C	$I_F \leq 70 \text{ mA}$
Storage Temperature	T_{STG}	-50	125	°C	
Junction Temperature	T_j		150	°C	
Reverse Voltage	V_R		<10	V	$T_a = 25^\circ\text{C}$
Power Dissipation	P_D		200	mW	$T_a = 25^\circ\text{C}$

- Optical Characteristics ($T_a=25^\circ\text{C}$)¹**

Parameter	Symbol	Value			Unit	Condition
		Min.	Typ.	Max.		
Dominant Wavelength ²	λ_{DOM}	587	591	597	nm	$I_F = 70 \text{ mA}$
Spectral Bandwidth, 50%	$\Delta\lambda$	-	20	-	nm	$I_F = 70 \text{ mA}$
Viewing Angle	$2 \Phi_{1/2}$	-	120	-	Deg.	
Luminous Flux ²	Θ_v	3.4			lm	$I_F = 70 \text{ mA}$

- Electrical Characteristics @ 70mA, $T_a=25^\circ\text{C}$ ¹**

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Forward Voltage ² ($I_F=70 \text{ mA}$)	V_F	1.85	2.3	2.75	V

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- **Thermal Characteristics**

Parameter	Symbol		Value	Unit
Thermal Resistance	$R_{\Theta_{J-PIN}}$		85	K/W
Soldering Temperature	T_{Sold}	240 °C, 5 seconds maximum		-
	$T_{leadfreesold}$	260 °C, 3 seconds maximum		

- **Optical and Electrical Categories @ 70 mA, $T_A = 25^\circ\text{C}$ ¹**

Dominant Wavelength λ_{DOM}			Luminous Flux θ_v^4			Forward Voltage V_f		
Bin Code ³	Min. (nm)	Max. (nm)	Bin Code ⁵	Min. (lm)	Max. (lm)	Bin Code	Min. (V)	Max. (V)
0	587	591	F	3.4	3.8	0	1.85	2.05
1	590	594	G	3.8	4.2	1	1.95	2.15
2	593	597	H	4.2	4.6	2	2.05	2.25
			I	4.6	5.0	3	2.15	2.35
			J	5.0	5.4	4	2.25	2.45
			K	5.4	5.9	5	2.35	2.55
			L	5.9	6.4	6	2.45	2.65
			M	6.4	7.0	7	2.55	2.75
			N	7.0	7.6			
			O	7.6	8.3			

¹ after 1 min operation, $R_{thja} = 180^\circ\text{C/W}$

² see available optical and electrical categories

³ customer's special requirements are also welcome

⁴ accuracy of $\pm 10\%$

⁵ for higher luminous flux please check availability; for lower luminous flux, please refer to STL type

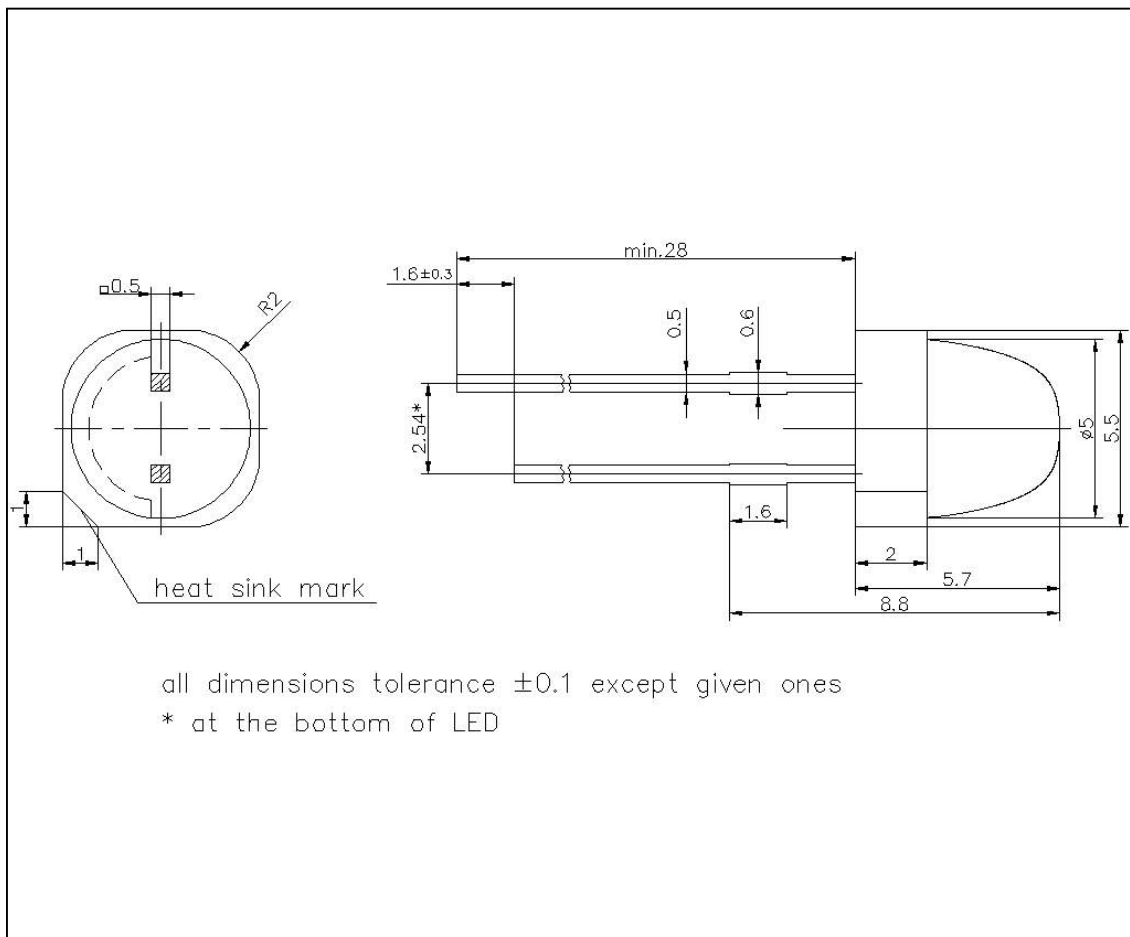
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Outline Drawing :



Device Polarity :

For ATLL type LEDs the LED chip is mounted on the Anode leg. The heat sink mark marks also the Anode.

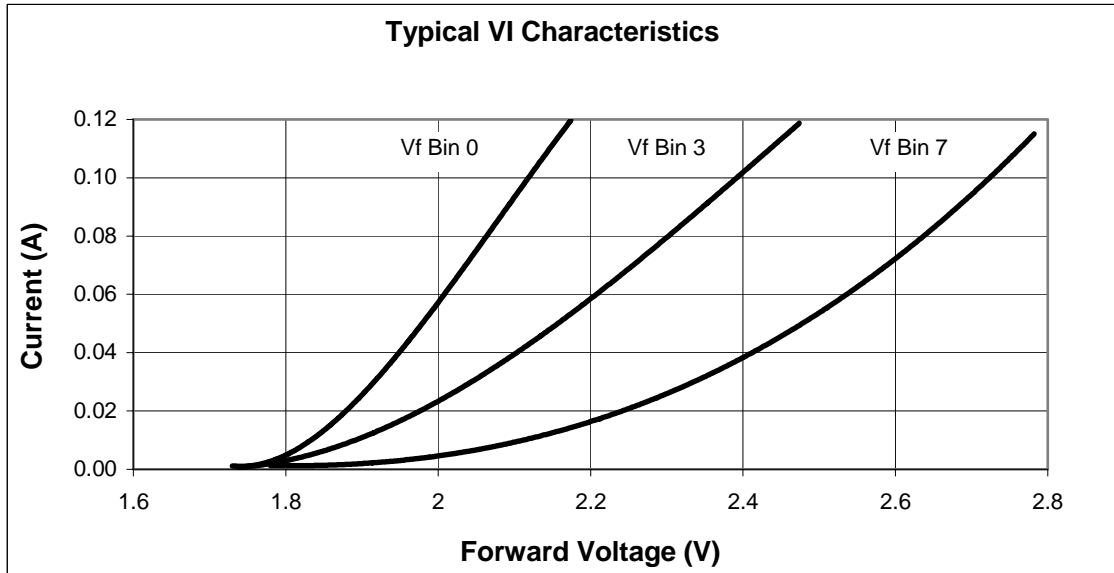
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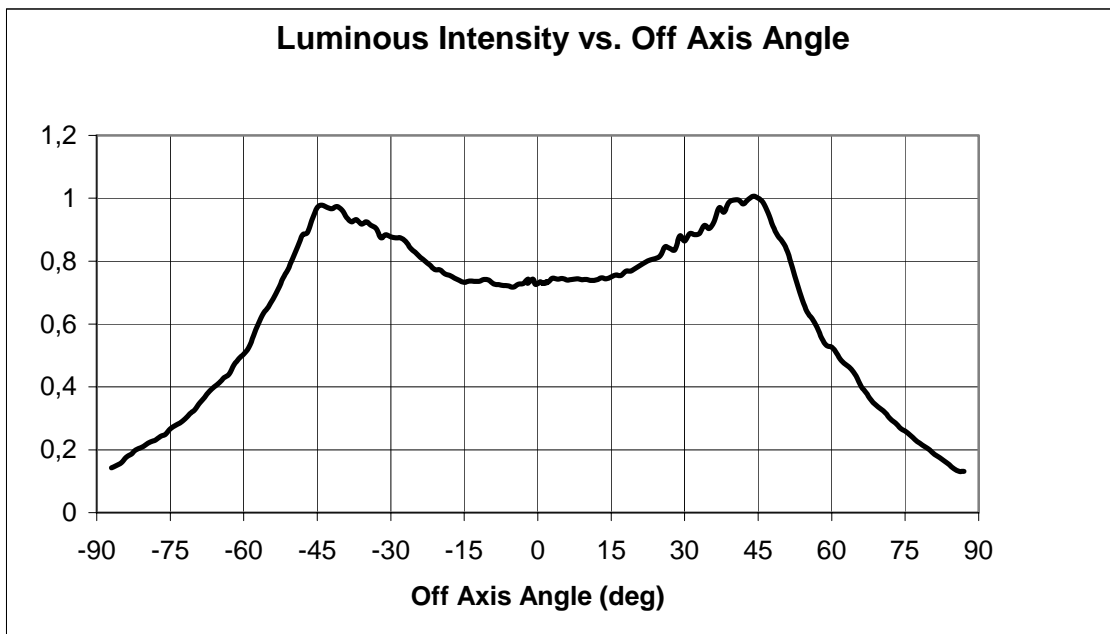
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Typical Forward Current vs. Forward Voltage:



Typical Angular Luminous Intensity Distribution



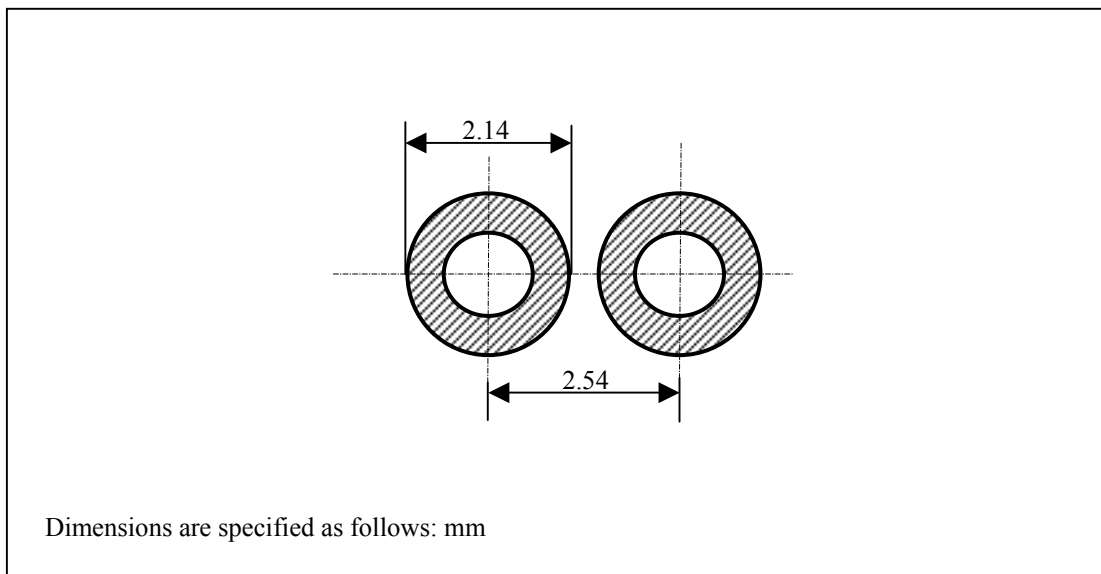
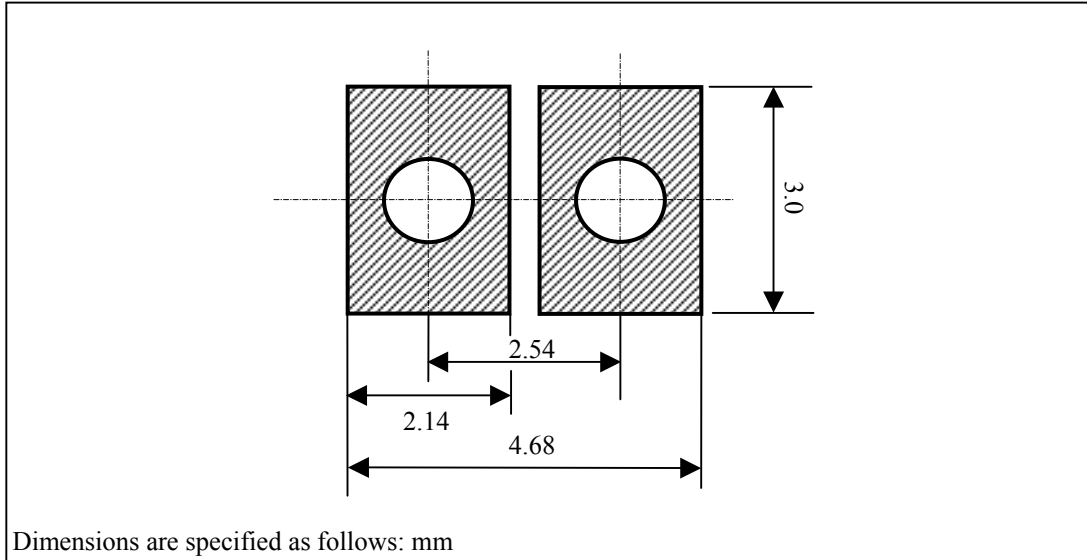
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Recommended Solder Pad (TTW Soldering)



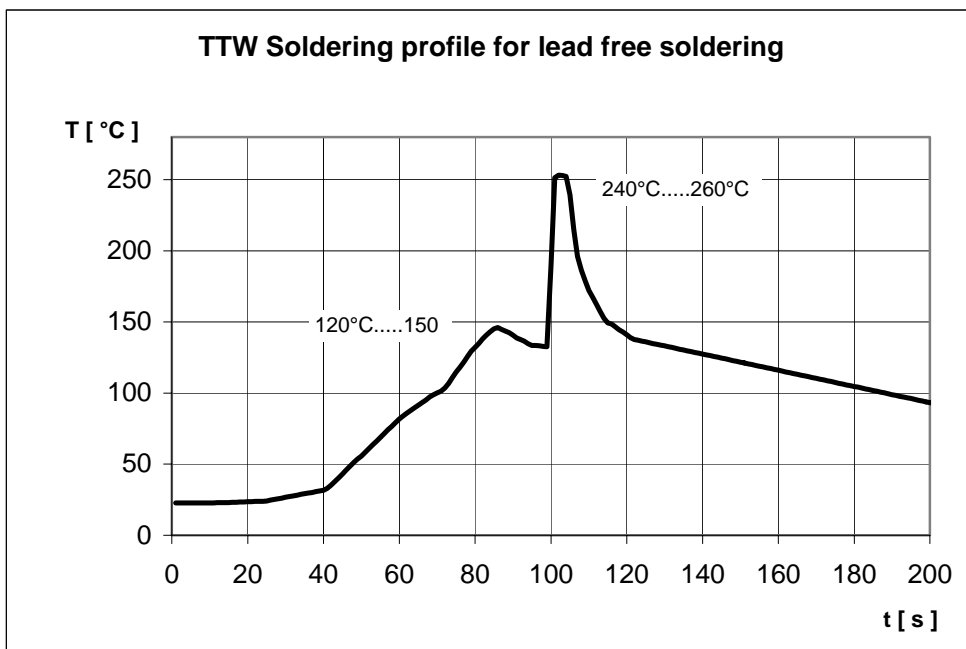
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Typical Soldering Profile:



Notice: Only use VOC-free (volatile organic component) fluxer for soldering, please refer to G.L.I. application notes.

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