



## DATA SHEET

ATL120-Y-xxxxxx

LED TYPE <b>ATL 120</b> 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 <sub>OP</sub>	-40	120	°C	I <sub>F</sub> ≤ 70 mA
Storage Temperature	T <sub>STG</sub>	-50	125	°C	
Junction Temperature	T <sub>J</sub>		150	°C	
Reverse Voltage	V <sub>R</sub>		<10	V	T <sub>a</sub> = 25°C
Power Dissipation	P <sub>D</sub>		200	mW	T <sub>a</sub> = 25°C

- Optical Characteristics (T<sub>a</sub>=25°C)<sup>1</sup>**

Parameter	Symbol	Value			Unit	Condition
		Min.	Typ.	Max.		
Dominant Wavelength <sup>2</sup>	λ <sub>DOM</sub>	587	591	597	nm	I <sub>F</sub> = 70 mA
Spectral Bandwidth, 50%	Δλ	-	20	-	nm	I <sub>F</sub> = 70 mA
Viewing Angle	2 Φ <sub>1/2</sub>	-	120	-	Deg.	
Luminous Flux <sup>2</sup>	Θ <sub>v</sub>	3.4			lm	I <sub>F</sub> = 70 mA

- Electrical Characteristics @ 70mA, T<sub>a</sub>=25°C<sup>1</sup>**

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Forward Voltage <sup>2</sup> ( I <sub>F</sub> =70 mA )	V <sub>F</sub>	1.85	2.3	2.75	V

Document	Index	Author	Allocation	Pages	Checked / Approval	Date of Approval
045046	b	Catic	PM	1/6	Kaluza / Manth	30.06.2006



## DATA SHEET

ATL120-Y-xxxxxx

- **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,  $T_A = 25^\circ\text{C}$ <sup>1</sup>**

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

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

<sup>2</sup> see available optical and electrical categories

<sup>3</sup> customer's special requirements are also welcome

<sup>4</sup> accuracy of  $\pm 10\%$

<sup>5</sup> for higher luminous flux please check availability; for lower luminous flux, please refer to STL type

Document	Index	Author	Allocation	Pages	Checked / Approval	Date of Approval
045046	b	Catic	PM	2/6	Kaluza / Manth	30.06.2006

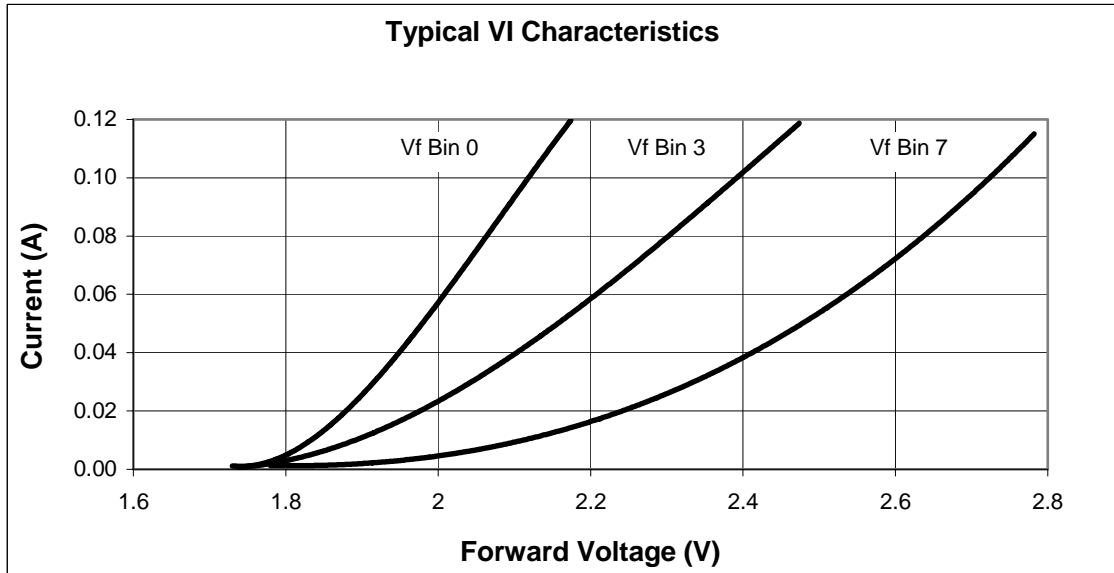




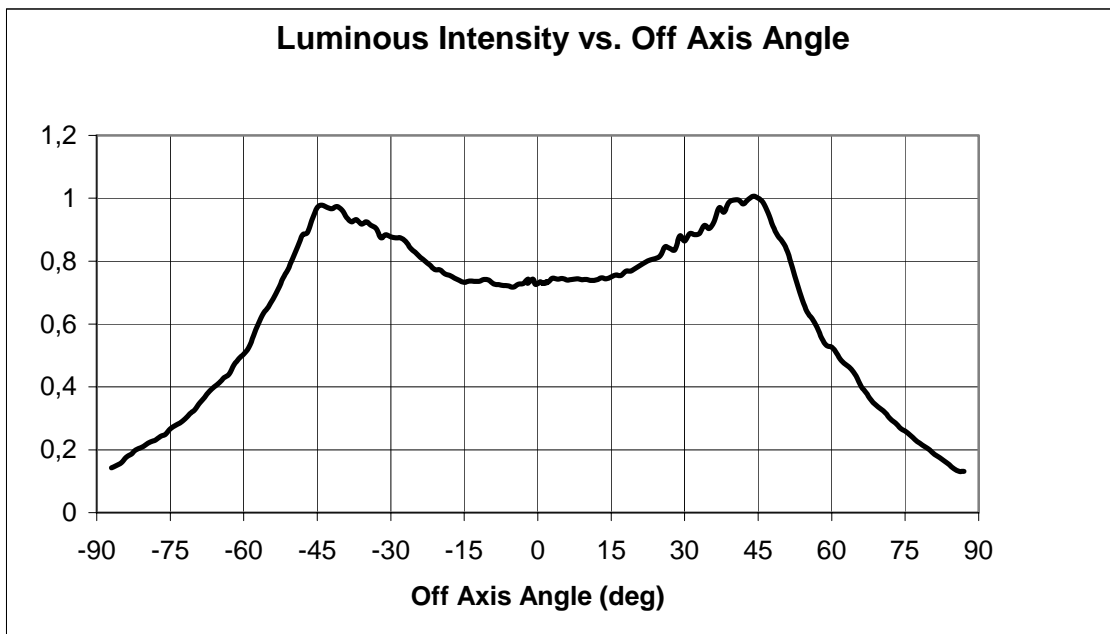
DATA SHEET

ATL120-Y-xxxxxx

**Typical Forward Current vs. Forward Voltage:**



**Typical Angular Luminous Intensity Distribution**



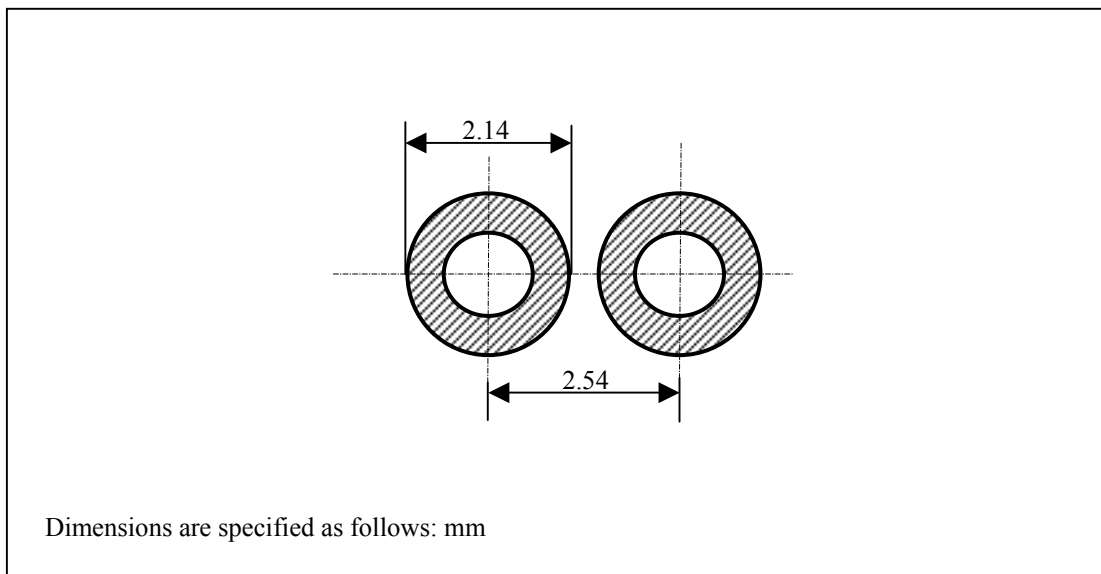
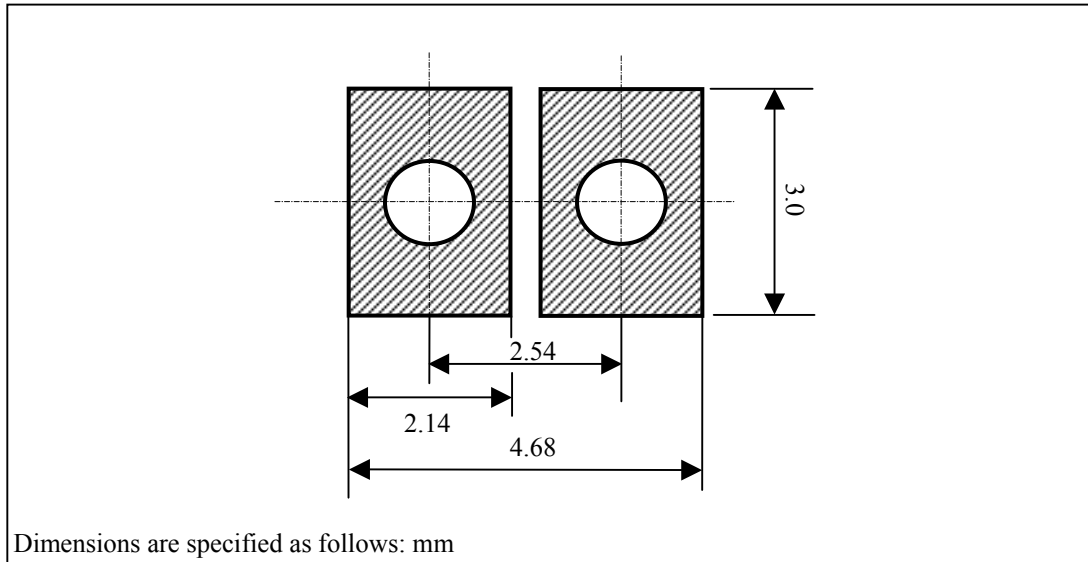
Document	Index	Author	Allocation	Pages	Checked / Approval	Date of Approval
045046	b	Catic	PM	4/6	Kaluza / Manth	30.06.2006



DATA SHEET

ATL120-Y-xxxxxx

**Recommended Solder Pad ( TTW Soldering )**



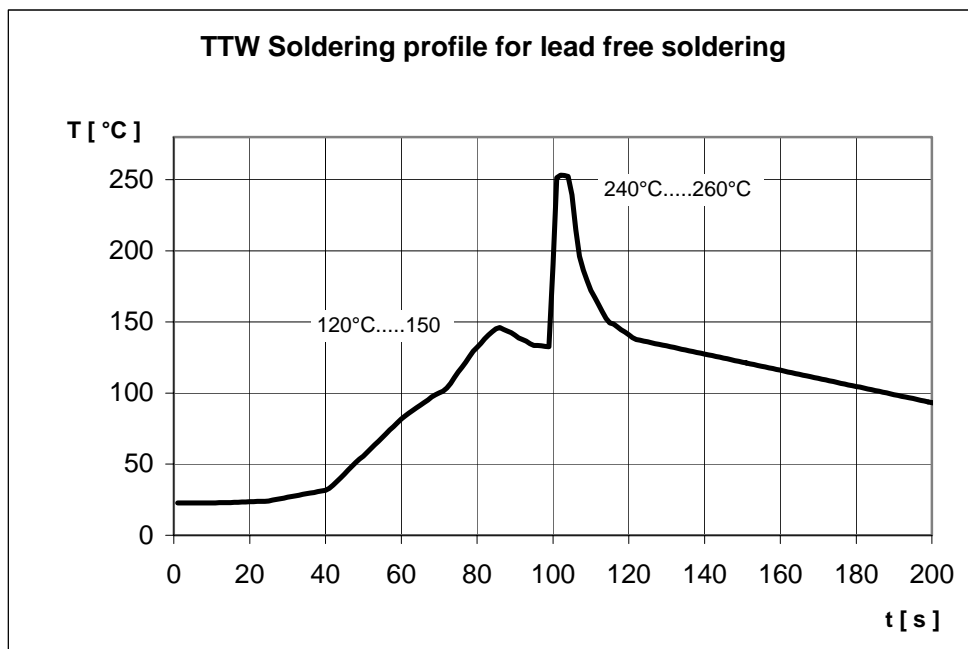
Document	Index	Author	Allocation	Pages	Checked / Approval	Date of Approval
045046	b	Catic	PM	5/6	Kaluza / Manth	30.06.2006



DATA SHEET

ATL120-Y-xxxxxx

**Typical Soldering Profile:**



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

Document	Index	Author	Allocation	Pages	Checked / Approval	Date of Approval
045046	b	Catic	PM	6/6	Kaluza / Manth	30.06.2006