



- 6063 aluminium matt black LED profile 2500mm
- Opal PC diffuser
- Sold in kits of 6 or as single pieces
- Available in a large range of LED strip options

## Aluminum 6063-T5

Component	Wt. %	Component	Wt. %	Component	Wt. %
Al	Max 97.5	Mg	0.45 - 0.9	Si	0.2 - 0.6
Cr	Max 0.1	Mn	Max 0.1	Ti	Max 0.1
Cu	Max 0.1	Other, each	Max 0.05	Zn	Max 0.1
Fe	Max 0.35	Other, total	Max 0.15		

Physical Properties	Metric	English	Comments
Density	<a href="#">2.7 g/cc</a>	0.0975 lb/in <sup>3</sup>	AA; Typical

### Mechanical Properties

Hardness, Brinell	60	60	AA; Typical; 500 g load; 10 mm ball
Ultimate Tensile Strength	<a href="#">186 MPa</a>	27000 psi	AA; Typical
Tensile Yield Strength	<a href="#">145 MPa</a>	21000 psi	AA; Typical
Elongation at Break	12 %	12 %	AA; Typical; 1/16 in. (1.6 mm) Thickness
Modulus of Elasticity	<a href="#">68.9 GPa</a>	10000 ksi	AA; Typical; Average of tension and compression. Compression modulus is about 2% greater than tensile modulus.
Poisson's Ratio	0.33	0.33	
Fatigue Strength	<a href="#">68.9 MPa</a>	10000 psi	AA; 500,000,000 cycles completely reversed stress; RR Moore machine/specimen
Shear Modulus	<a href="#">25.8 GPa</a>	3740 ksi	
Shear Strength	<a href="#">117 MPa</a>	17000 psi	AA; Typical

### Electrical Properties

Electrical Resistivity	<a href="#">3.16e-006 ohm-cm</a>	3.49e-006 ohm-cm	AA; Typical at 68°F
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### Thermal Properties

CTE, linear 68°F	<a href="#">23.4 μm/m-°C</a>	13 μin/in-°F	AA; Typical; Average over 68-212°F range.
CTE, linear 250°C	<a href="#">25.6 μm/m-°C</a>	14.2 μin/in-°F	Average over the range 20-300°C
Heat Capacity	<a href="#">0.9 J/g-°C</a>	0.215 BTU/lb-°F	
Thermal Conductivity	<a href="#">209 W/m-K</a>	1450 BTU-in/hr-ft <sup>2</sup> -°F	AA; Typical at 77°F
Melting Point	616 - 654 °C	1140 - 1210 °F	AA; Typical range based on typical composition for wrought products 1/4 inch thickness or greater
Solidus	<a href="#">616 °C</a>	1140 °F	AA; Typical
Liquidus	<a href="#">654 °C</a>	1210 °F	AA; Typical

### Processing Properties

Annealing Temperature	<a href="#">413 °C</a>	775 °F	hold at temperature for 2 to 3 hr; cool at 50 °F per hour from 775 to 500 °F
Solution Temperature	<a href="#">521 °C</a>	970 °F	
Aging Temperature	<a href="#">182 °C</a>	360 °F	hold at temperature for 1 hr

Polycarbonate (PC), pellets

- (f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.
- (f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.
- (z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix)
- + - Material designations may be followed by a six digit numerical code denoting color.

Flammability	Value	Test Method
Flame Rating		
1.50 mm, ALL	HB	UL 94
3.00 mm, ALL	HB	UL 94
6.00 mm, ALL	HB	UL 94
0.750 to 1.40 mm, ALL	V-2	UL 94 IEC 60695-11-10, -20
3.00 mm, ALL	HB40	IEC 60695-11-10, -20
6.00 mm, ALL	HB40	IEC 60695-11-10, -20
1.50 mm, ALL	HB75	IEC 60695-11-10, -20
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746
1.50 mm	PLC 3	
3.00 mm	PLC 2	
6.00 mm	PLC 0	
High Amp Arc Ignition (HAI)		UL 746
1.50 mm	PLC 0	
3.00 mm	PLC 0	
6.00 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 2	UL 746
Dielectric Strength	23 kV/mm	ASTM D149 IEC 60243-1
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746
Volume Resistivity	1.0E+16 ohms-cm	ASTM D257 IEC 60093
Arc Resistance	PLC 6	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746
1.50 mm	125 °C	
3.00 mm	125 °C	
6.00 mm	125 °C	
RTI Imp		UL 746
1.50 mm	115 °C	
3.00 mm	115 °C	
6.00 mm	115 °C	
Thermal	Value	Test Method
RTI Str		UL 746
1.50 mm	125 °C	
3.00 mm	125 °C	
6.00 mm	125 °C	
Physical	Value	Test Method
Dimensional Stability	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f2, f1	UL 746C

