

TCP™100-07-06A is a Thermally Conductive Engineering Plastic developed for the housing design which requires high thermally conductivity and reduces the weight more than 30% comparing with the same aluminium devices.



### Application

TCP™100-07-06A can be used in applications such as Heat Sinking Housing at LED-lit BLU in LCD/LED TV and LED-lit lamps such as MR16. Also it can replace the normal Aluminum heat sink.

### Features

- » Good thermal conductivity: **0.7W/mK**
- » Excellent thermal conductivity compared to normal engineering plastics
- » Lighter than normal Aluminum housing 30% in weight
- » Excellent mould ability in injection moulding
- » Much higher production yield than normal Aluminum Die Casting
- » Excellent flexibility in designing final products such as housings.
- » UL94 V-0 (Ready).

## Typical Properties of TCP™100-07-06A

Items	Test method	Unit	Typical data
<b>Physical Properties</b>			
The material	*****	*****	Nylon
Color	Visual	*****	White
Melt index	ASTM D1238	g/10min	80
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.5
Shrinkage	ASTM D955	%	0.2-0.5
<b>Mechanical Properties</b>			
Tensile Strength	ASTM D638	MPa	39.55
Flexural Strength	ASTM D790	MPa	45.5
Flexural Modulus	ASTM D638	MPa	9500
Impact Strength, notched	ASTM D256	kJ/m <sup>2</sup>	5.3
<b>Electrical Properties</b>			
Dielectric Breakdown Voltage	ASTM D149	KV/mm	>5.5
Dielectric Constant, 1MHz	ASTM D150	*****	4.5
Volume Resistivity	ASTM D257	Ohm-meter	8.0 X 10 <sup>12</sup>
<b>Thermal Properties</b>			
Heat Deflection Temperature	ASTM D648	°C	180
Thermal Conductivity Through Plane	ASTM D5470	W/m-K	0.7
Flame retardancy	Min. thick. 1.0mm	Class	V-0

\*These are typical values and should not be used for establishing product specification. The properties may vary upon the machine process under use. For more information please contact Ziitek Tech directly.

Gap Fillers | Pouring sealant | Silicon tape | Thermally Conductive paste | Flake graphite | Thermally Conductive Insulators  
Ceramic heat | Thermally Conductive plastic | Thermally Conductive Adhesive Tapes

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TCP™100-07-06A Injection parameters		Value Range
Barrel Zone Temperature	One sect / °C	240-260°C
	Two sect / °C	260-275°C
	Three sect / °C	260-275°C
Mouth Temperature / °C		250-280°C
Melt Temperature / °C		250-280°C
Bake Temperature / °C		90-100°C 4H
Mould Temperature / °C		80-100°C
Injection Pressure / Bar		3-9Mpa
Injection Speed / mm/s		High Speed
Remarks: Data from the laboratory of the Division I ① above are for reference only, not as a product standard reference. ② The typical processing conditions according to different models, different mold and product requirements to make the appropriate adj		

### Handling & Safety

TCP™100 should be used in accordance with good industrial practice. For more detailed information please contact Ziitek technical service group.

### Supply Appearance And Standard Packing

TCP™100 is supplied in regular pellet form packaged in polyethylene bags. Net weight is 25kg per bag. For more information please contact us.



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