

TCP™100-50-01A 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™100-50-01A 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: **5.0W/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

## Typical Properties of TCP™100-50-01A

Items	Test method	Unit	Typical data
<b>Physical Properties</b>			
Material	****	****	Nylon
Color	Visual	****	Black
Melt index	ASTM D1238	g/10min	4
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.45
Shrinkage	ASTM D955	%	0.1
<b>Mechanical Properties</b>			
Tensile Strength	ASTM D638	MPa	55
Flexural Strength	ASTM D790	MPa	80
Flexural Modulus	ASTM D638	MPa	15800
Impact Strength, notched	ASTM D256	kJ/m <sup>2</sup>	2.5~3.5
<b>Electrical Properties</b>			
Dielectric Constant, 1MHz	ASTM D150	***	4.5
Volume Resistivity	ASTM D257	Ohm-meter	10000
<b>Thermal Properties</b>			
Heat Deflection Temperature	ASTM D648	°C	150
Vicat Temperature	ASTM D648	°C	15.0
Thermal Conductivity Through Plane	ASTM E1461	W/m-K	5.0
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

<b>Canada:</b> Tel: +001-604-2998559 E-mail: sales@thermazig.com	<b>Taiwan:</b> Tel: +886-2-22771007 Fax: +886-2-22771075 E-mail: frances@ziitek.com.tw	<b>Dongguan:</b> Tel: +86-769-38801208 Fax: +86-769-83791290 E-mail: angus@ziitek.com	<b>Kunshan:</b> Tel: +86-512-57816297 Fax: +86-512-57816327 E-mail: kelvin@ziitek.com	<b>Hangzhou:</b> Tel: +86-0571-63850366 Fax: +86-0571-63850322 E-mail: alex@ziitek.com
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The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein.

## Injection Parameters of Recommends

TCP™100-50-01A Injection parameters		Value Range
Barrel Zone Temperature	One sect / °C	240-260°C
	Two sect / °C	250-270°C
	Three sect / °C	260-280°C
Mouth Temperature / °C		265-280°C
Melt Temperature / °C		250-280°C
Bake Temperature / °C		100-120°C 4H
Mould Temperature / °C		80-100°C
Injection Pressure / Bar		3-9Mpa
Injection Speed / mm/s		Medium speed
<p>Remarks:</p> <p>Data from the laboratory of the Division I ① above are for reference only, not as a product standard reference.</p> <p>② The typical processing conditions according to different models, different mold and product requirements to make the appropriate adjustments.</p>		

## 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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**Canada:**  
Tel: +001-604-2998559  
E-mail: sales@thermazig.com

**Taiwan:**  
Tel: +886-2-22771007  
Fax: +886-2-22771075  
E-mail: frances@ziitek.com.tw

**Dongguan:**  
Tel: +86-769-38801208  
Fax: +86-769-83791290  
E-mail: angus@ziitek.com

**Kunshan:**  
Tel: +86-512-57816297  
Fax: +86-512-57816327  
E-mail: kelvin@ziitek.com

**Hangzhou:**  
Tel: +86-0571-63850366  
Fax: +86-0571-63850322  
E-mail: alex@ziitek.com

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