

MechaTronix in LED

LPF40 LED Pin Fin Heatsink $\varnothing$ 40mm



Features & Benefits

- Designed for high-performance convection cooling of power LEDs
- Diameter 40mm base
- Thermal resistance R_{th} 5.1 - 6.6°C/W
- Forged from highly conductive aluminum
- 32 round pins for maximum cooling surface
- 3 standard heights 30 to 50 mm
Overall height can be customized from 10 to 60 mm
- 2 standard base thicknesses 3 and 5 mm
Other base thicknesses on request
- 3 standard colors - clear anodised - black anodised
blue anodised



Order Information

Example: LPF40A30-3-Black

LPF40 **1** **2** - **3** - **4**

- 1** Mechanical version
 - A] Solid base
 - B] Center hole $\varnothing$ 11.5mm
 - C] 3*M3 mounting hole
 - D] Center hole $\varnothing$ 11mm.5 + 3*M3 mounting hole
 - XX] Customised
- 2** Height (pins+base) (mm) - 30, 40 or 50
- 3** Base thickness (mm) – 3 or 5
- 4** Color anodising – black, clear or blue


Xicato
Making sense with LEDs


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Product Details

	Total Height mm	Base Height mm	Rth(°C/W)	Volume mm ³	Cooling Surface mm ²	Weight gr
LPF40A30-3	30	3	6.6	9537.88	14426.19	25.75
LPF40A40-3	40	3	5.5	11674.16	18698.76	31.52
LPF40A50-3	50	3	5.1	13810.44	22971.33	37.29
LPF40A30-5	30	5	6.6	11623.89	13823.01	31.38
LPF40A40-5	40	5	5.5	13760.18	18095.57	37.15
LPF40A50-5	50	5	5.1	15896.46	22368.14	42.92

Notes:

1. MechaTronix reserves the right to change products or specifications without prior notice.
2. Mentioned models are an extraction of the full product range.
For specific mechanical adaptations please contact MechaTronix.
3. All these types are made by forging process from highly conductive aluminum type AL6063 T5 with a typical Thermal Conductivity of 209W/m-K.



A Mechanical version
Solid base



B Mechanical version
Center hole
 $\varnothing$ 11.5mm



C Mechanical version
3*M3 mounting hole



D Mechanical version
Center hole
 $\varnothing$ 11.5mm + 3*M3 mounting hole

Drawings & Dimensions

Example: LPF40A30-3-Black



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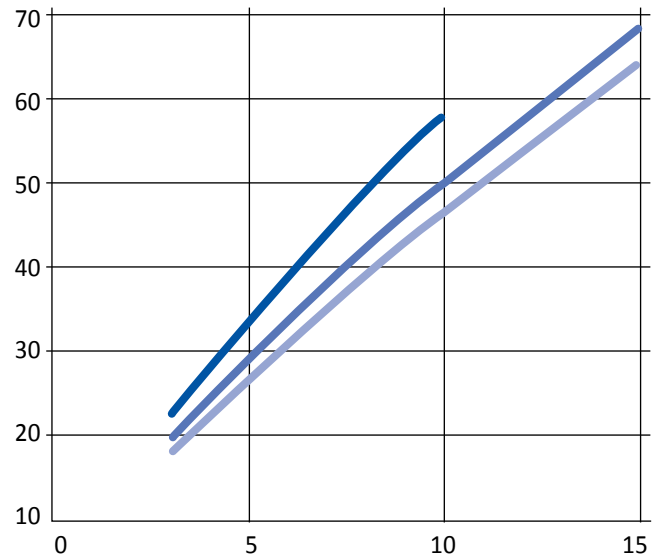
Thermal Data

Heat sink base to ambient thermal resistance, R_{hs-amb} [K/W]			
Power (W)	LPF40A30-5-Black	LPF40A40-5-Black	LPF40A50-5-Black
3	7.5	6.6	6.0
5	6.7	5.8	5.4
7	6.3	5.4	5.0
10	5.8	5.0	4.7
15	n/a	4.6	4.3
$R_{th Av.}$	6.6	5.5	5.1

Spreading resistance, R_{sp} [K/W]					
Base thickness		t=2mm	t=3mm	t=5mm	t=10mm
Ratio of light engine (LE) area over heat sink base area, A_{LE}/A_{hs} [%]	1%	0.87	0.61	0.41	0.30
	3%	0.68	0.47	0.30	0.20
	5%	0.54	0.37	0.24	0.15
	8%	0.44	0.30	0.19	0.12
	11%	0.36	0.24	0.15	0.09
	20%	0.24	0.17	0.10	0.06
	32%	0.16	0.11	0.07	0.04
	62%	0.06	0.04	0.03	0.01

Heat sink to ambient temperature difference [°C]

— LPF40A30-5-Black
— LPF40A40-5-Black
— LPF40A50-5-Black

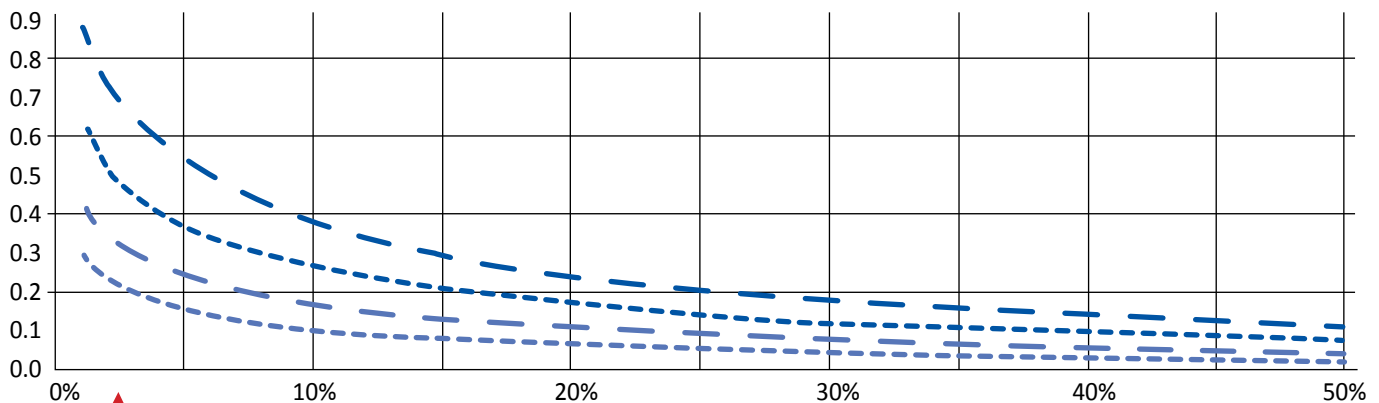


Power [W]

Heat sink base spreading resistance, R_{sp} [K/W], based on base thickness, t

Spreading resistance, R_{sp} [K/W]

— t=2mm — t=3mm — t=5mm — t=10mm



Ratio of light engine (LE) area over heat sink base area, A_{LE}/A_{hs} [%]