

# MechaTronix in LED

## LPF5050-BRI-ESR Bridgelux LED ES Square Array Heat Sink ø50mm



### Features & Benefits

- Designed for Bridgelux LED ES Square Array
- Diameter 50mm base – height 50mm
- Thermal resistance Rth heat sink 5.1°C/W
- Required Rth according Bridgelux datasheets at Tamb 40°C  
- BXRA-XX01200/1350/1600: 3.68°C/W (Tc105°)
- Specific mounting pattern 2xM2.5 + cable guidance hole



### Order Information



Example : LPF5050-BRI-ESR-B-1

LPF5050-BRI-ESR - **1** - **2**

- 1** Anodising color  
 "B" - Black Anodised  
 "C" - Clear Anodised  
 "Z" - Custom ( specify )
- 2** Mounting Options - see graphics for details  
 Combinations available  
 Ex. order code - 13  
 means option 1 and 3 combined

MOUNTING OPTION	THREAD	THREAD DEPTH
NONE/BLANC	NONE	NONE
1	M8 x 1	5mm MIN.
2	#5/16-24 UNC	0.197" MIN.
3	M50 x 2	Base contour

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## LPF5050-BRI-ESR Bridgelux LED ES Square Array Heat Sink $\phi 50\text{mm}$



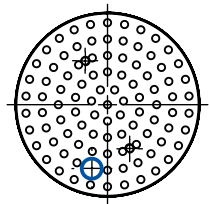
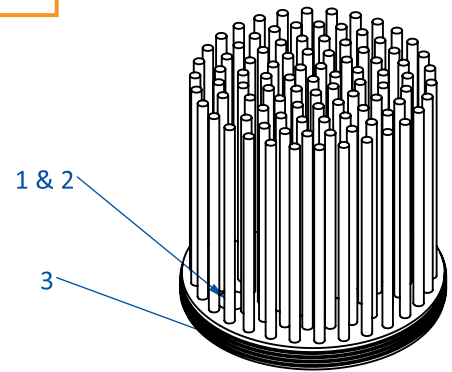
### Product Details

	Total Height <sup>mm</sup>	R <sub>th</sub> (°C/W)	Volume <sup>mm<sup>3</sup></sup>	Cooling Surface <sup>mm<sup>2</sup></sup>	Weight <sup>gr</sup>
LPF5050-BRI-ESR	50.00	5.1	23399.63	32460.54	63.18

### Mounting Options

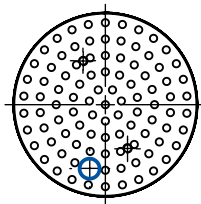
#### Notes:

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 AL1070 with a typical Thermal Conductivity of 209W/m-K.



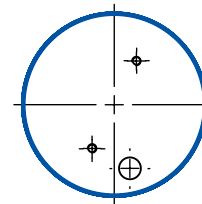
**1** Mechanical version  
Cable hole tapping

M8x1  
Depth: 5mm



**2** Mechanical version  
Hole tapping

5/16-24 UNC  
Depth: 0.197"

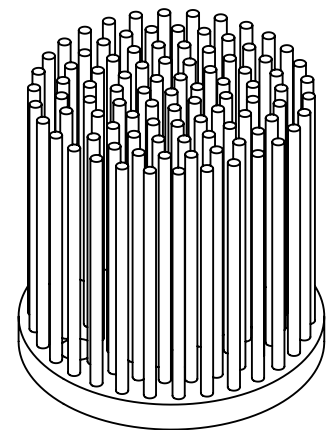
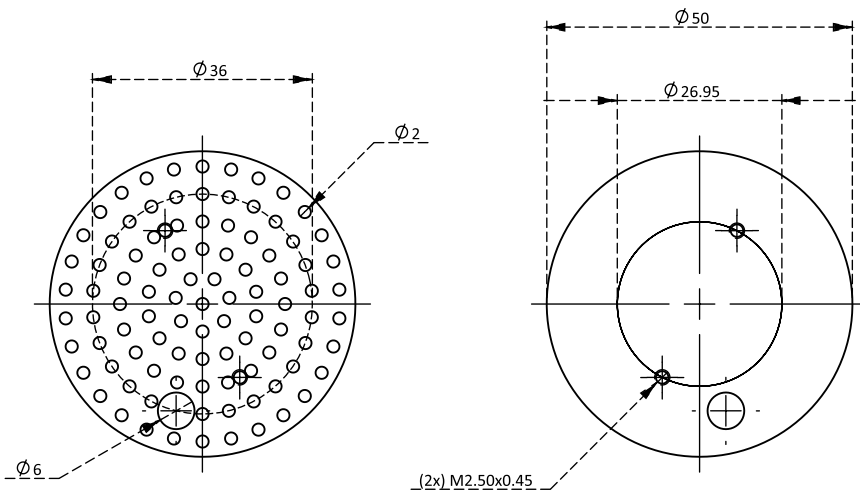


**3** Mechanical version  
M50x2

Screw thread around  
base contour

### Drawings & Dimensions

### Example : LPF5050-BRI-ESR



# MechaTronix in LED

## LPF5050-BRI-ESR Bridgelux LED ES Square Array Heat Sink $\phi$ 50mm

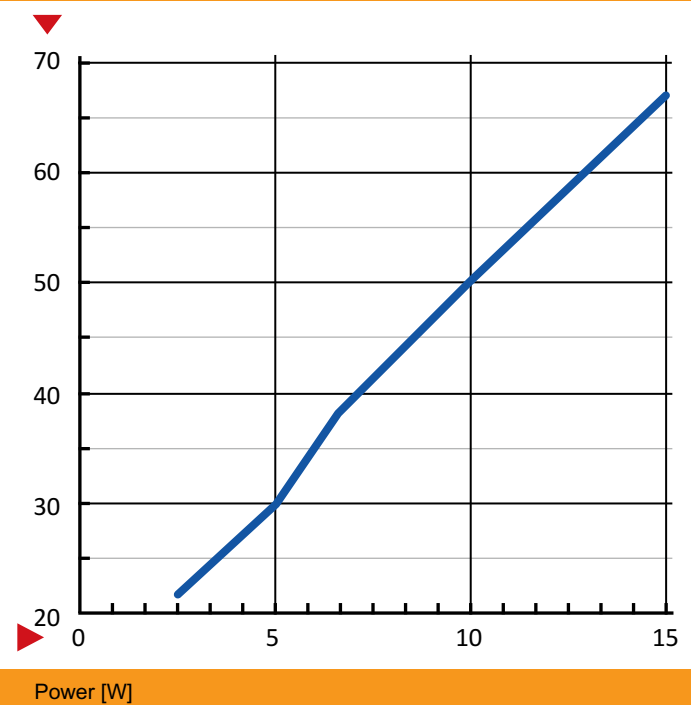


### Thermal Data

#### Heat sink base to ambient thermal resistance, $R_{hs-amb}$ [K/W]

Power (W)	LPF5050-BRI-ESR
3	7.0
5	6.1
7	5.6
10	5.0
15	4.5
$R_{th Av.}$	5.1

#### Heat sink to ambient temperature difference [ $^{\circ}$ C]



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

Base thickness	Ratio of light engine (LE) area over heat sink base area, ALE/Ahs [%]	t=2mm	t=3mm	t=5mm	t=10mm
		1%	0.87	0.61	0.41
	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 base spreading resistance, $R_{sp}$ [K/W], based on base thickness, t

