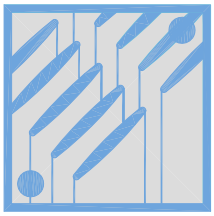


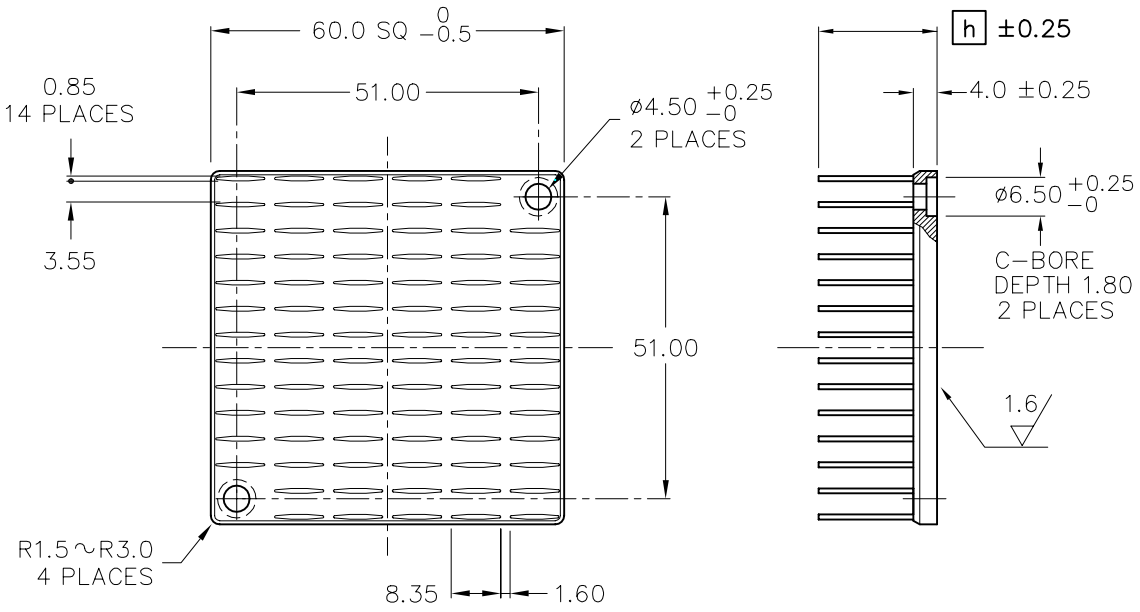
LPDM_S Series
LPDH_S Series
LPD_S Series

Low Pressure Drop Heat Sink
with Attachment Holes

ALPHA

ALPHA — Low Pressure Drop Heat Sink with attachment holes — LPDM60S

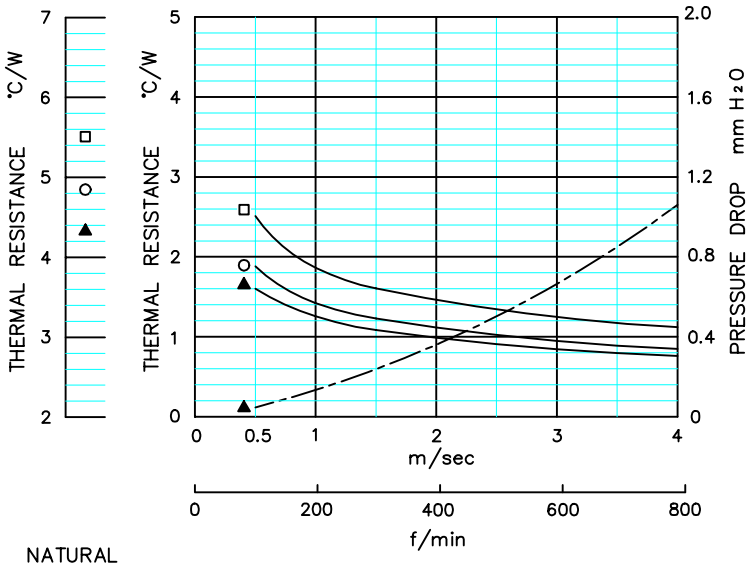
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LPDM60S−15B	15	50.4
LPDM60S−20B	20	55.9
LPDM60S−25B	25	61.4

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

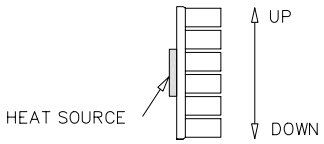
DATA



□ LPDM60S−15B
○ LPDM60S−20B
▲ LPDM60S−25B

DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ——
PRESURE DROP —— - ——

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 9.9(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

BASED ON ALPHA'S STANDARD TEST PROCEDURE.
REFER TO TECHNICAL INFORMATION.

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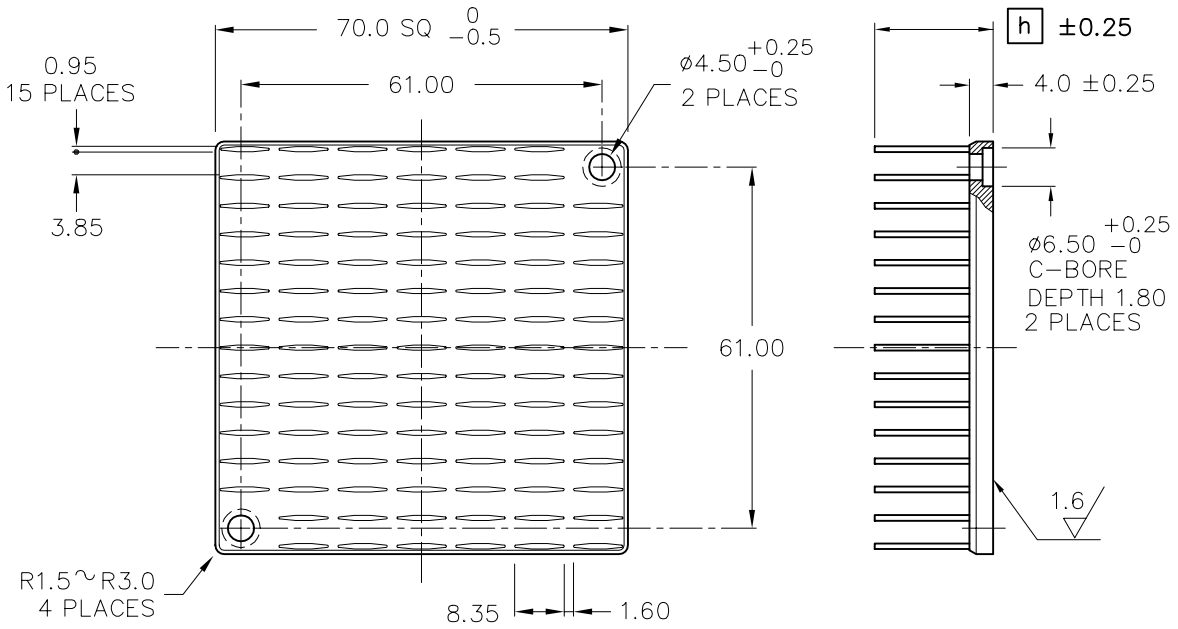
ALPHA

Low Pressure Drop Heat Sink with attachment holes

LPDM70S

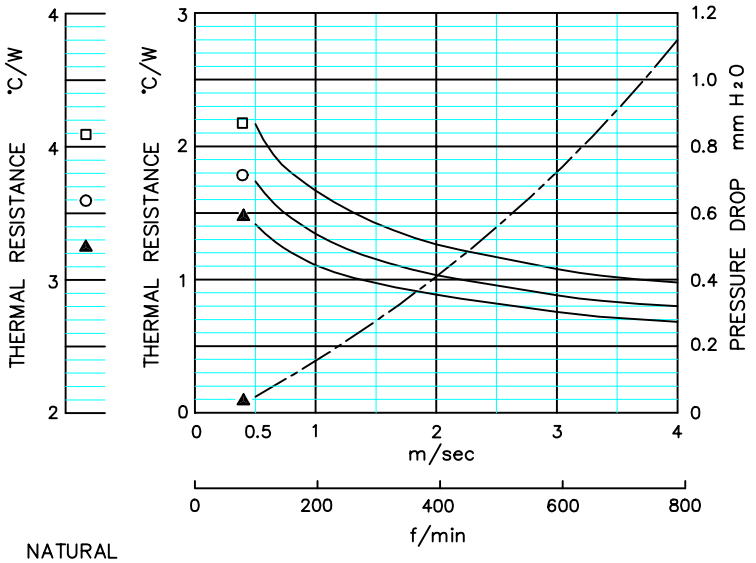
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LPDM70S−15B	15	70.7
LPDM70S−20B	20	78.6
LPDM70S−25B	25	86.6

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

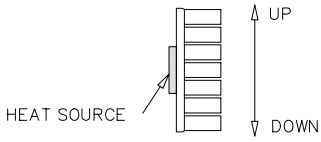


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

□ LPDM70S−15B
○ LPDM70S−20B
▲ LPDM70S−25B

- DUCTED CONDITION
  DUMMY HEATER SIZE: 12.7 SQ
  THERMAL RESISTANCE ——
  PRESURE DROP — - —
- NATURAL CONVECTION
  DUMMY HEATER SIZE: 25.4 SQ
  DISSPATED POWER: 13.3(W)



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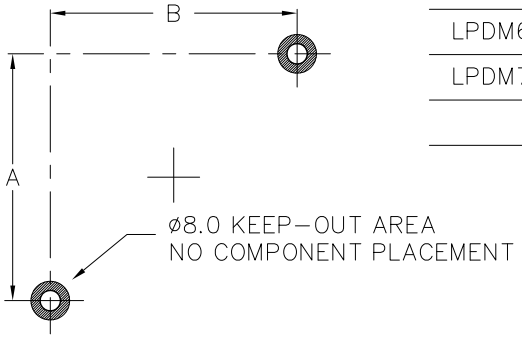
REF

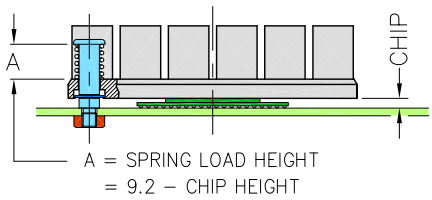
BOARD KEEPOUT PATTERNS



LPDM60S AND UBM60S	51.0	51.0
LPDM70S AND UBM70S	61.0	61.0
MODEL	A	B

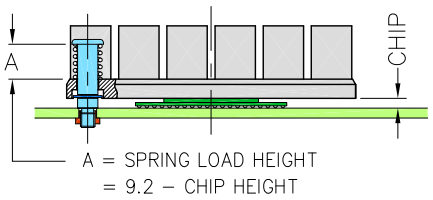
INSTALLATION

USE HEX NUTS M3x0.5



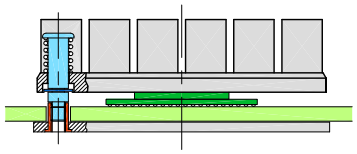
REQUIRES ø3.30 THRU HOLES IN BOARD.
RECOMMENDED P.C.B THICKNESS 1.6mm.
MINIMUM CHIP HEIGHT 1.5mm.

USE *MAC8* TH–1.6–XX–M3



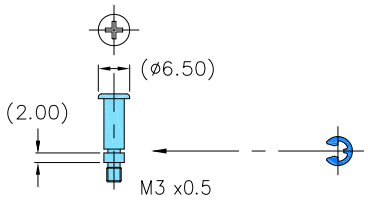
REQUIRES ø3.70 THRU HOLES IN BOARD.
MAC8 THREAD INSERT NEED THE SOLDERING.
RECOMMENDED P.C.B THICKNESS
MINIMUM 1.6mm ~ MAXIMUM 3.7mm
MINIMUM CHIP HEIGHT 1.5mm.

USE CUSTOM BACKING–PLATE



CUSTOM DESIGN FOR ANY PCB THICKNESS.

SHOULDER–SCREW/RETAINING RING E–2.5



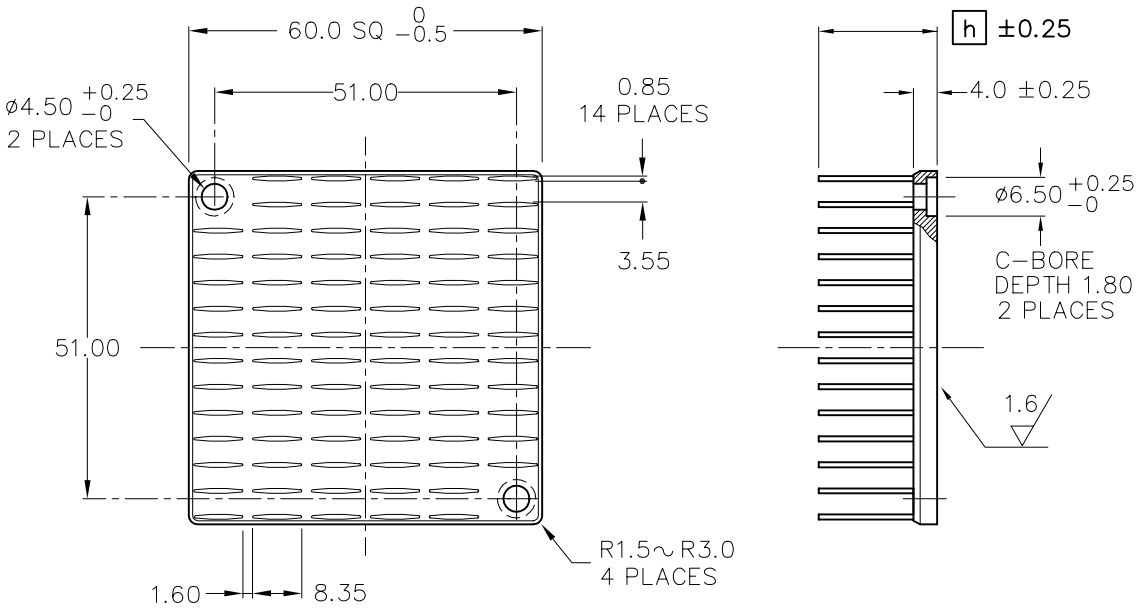
REFER TO THE DRAWING FOR DETAIL SPECIFICATION.

ALPHA

Low Pressure Drop Heat Sink with attachment holes

LPDH60S

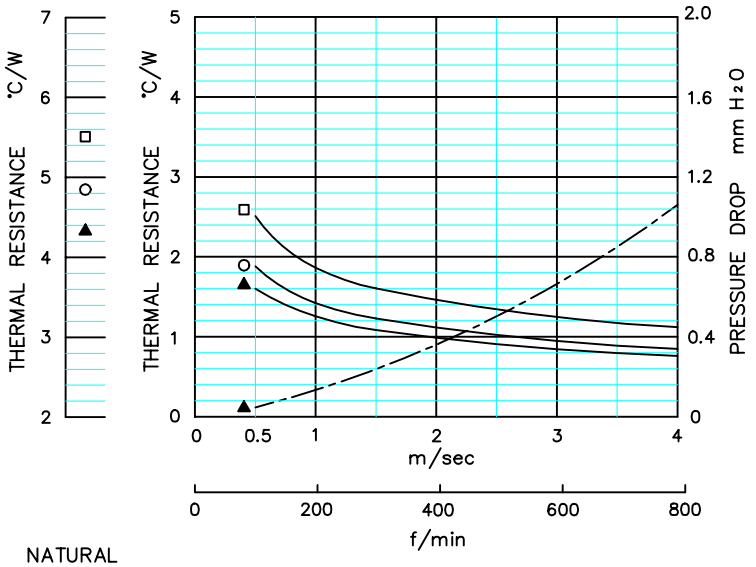
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LPDH60S−15B	15	50.4
LPDH60S−20B	20	55.9
LPDH60S−25B	25	61.4

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



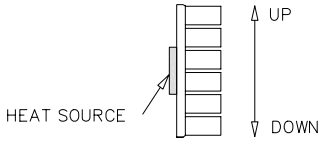
NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

□ LPDH60S−15B
○ LPDH60S−20B
▲ LPDH60S−25B

DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ——————
PRESURE DROP —— - ——

NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 9.9(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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REFER TO TECHNICAL INFORMATION.

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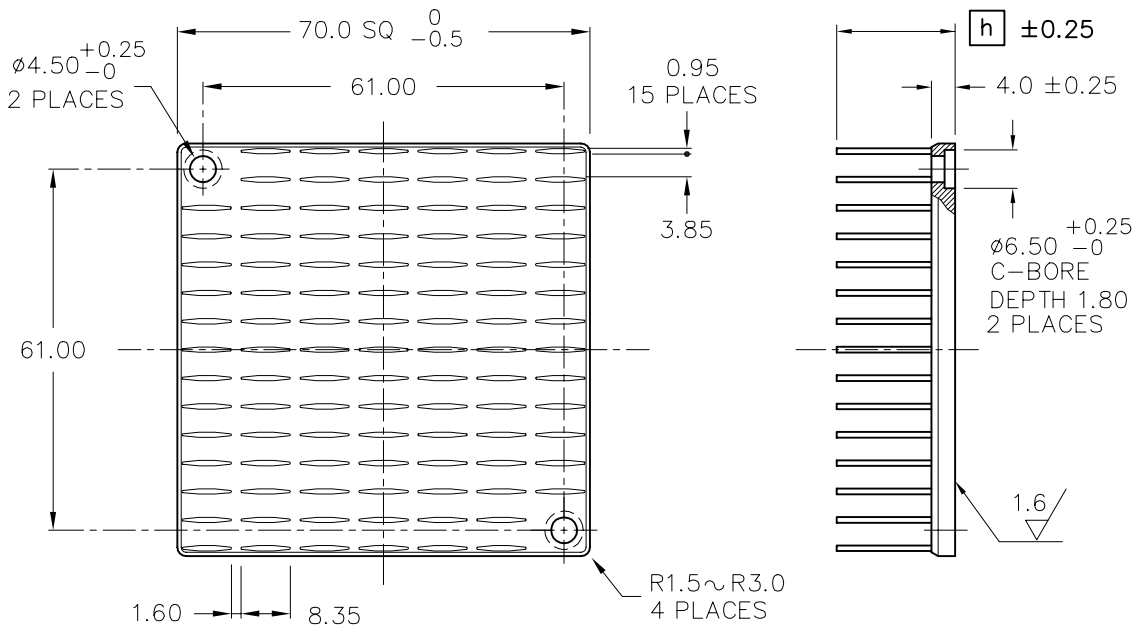
ALPHA

Low Pressure Drop Heat Sink with attachment holes

LPDH70S

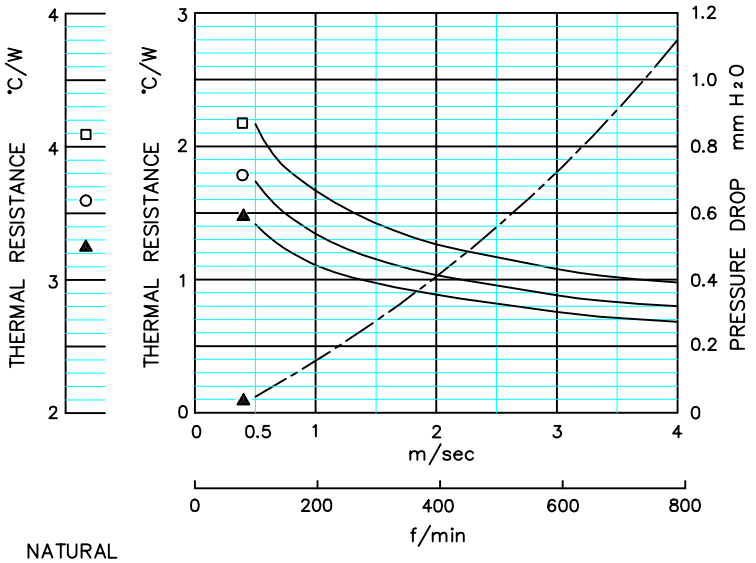
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LPDH70S−15B	15	70.7
LPDH70S−20B	20	78.6
LPDH70S−25B	25	86.6

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

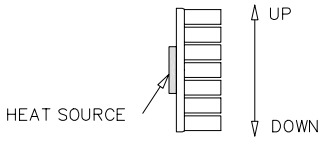


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

□ LPDH70S−15B
○ LPDH70S−20B
▲ LPDH70S−25B

- DUCTED CONDITION
  DUMMY HEATER SIZE: 12.7 SQ
  THERMAL RESISTANCE ——
  PRESURE DROP — - —
- NATURAL CONVECTION
  DUMMY HEATER SIZE: 25.4 SQ
  DISSPATED POWER: 13.3(W)



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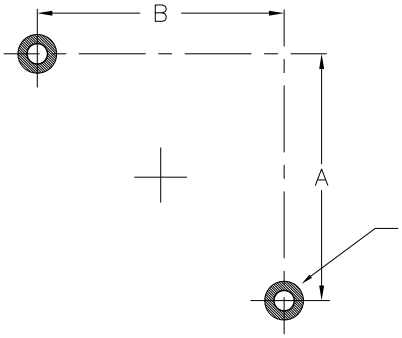
REF

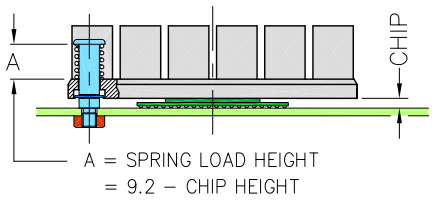
BOARD KEEPOUT PATTERNS



LPDH60S AND UBH60S	51.0	51.0
LPDH70S AND UBH70S	61.0	61.0
MODEL	A	B

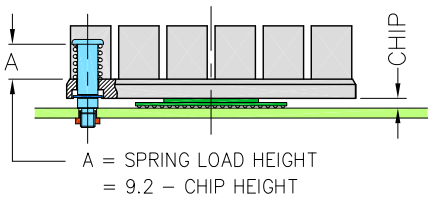
INSTALLATION

USE HEX NUTS M3x0.5



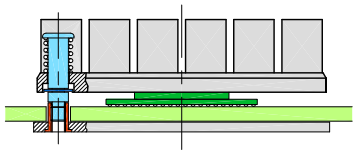
REQUIRES ø3.30 THRU HOLES IN BOARD.
RECOMMENDED P.C.B THICKNESS 1.6mm.
MINIMUM CHIP HEIGHT 1.5mm.

USE *MAC8* TH-1.6-XX-M3



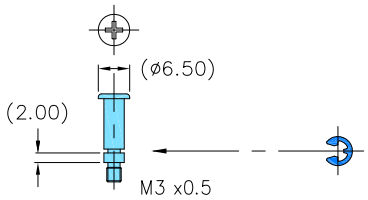
REQUIRES ø3.70 THRU HOLES IN BOARD.
MAC8 THREAD INSERT NEED THE SOLDERING.
RECOMMENDED P.C.B THICKNESS
MINIMUM 1.6mm ~ MAXIMUM 3.7mm
MINIMUM CHIP HEIGHT 1.5mm.

USE CUSTOM BACKING-PLATE



CUSTOM DESIGN FOR ANY PCB THICKNESS.

SHOULDER-SCREW/RETAINING RING E-2.5



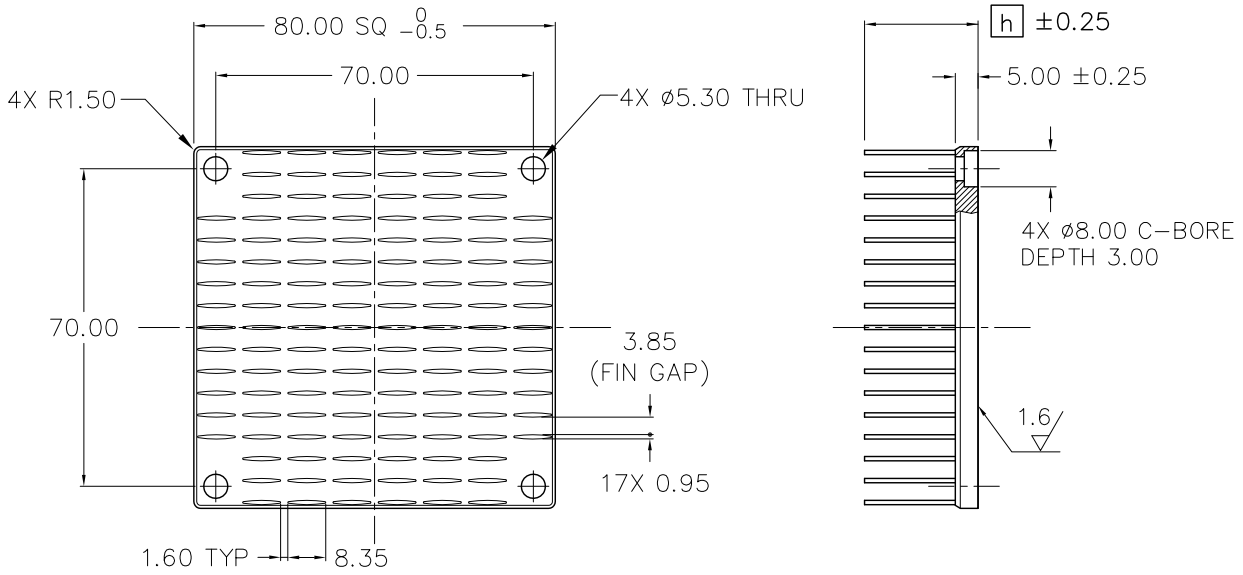
REFER TO THE DRAWING FOR DETAIL SPECIFICATION.

ALPHA

Low Pressure Drop Heat Sink with attachment holes

LPD80S

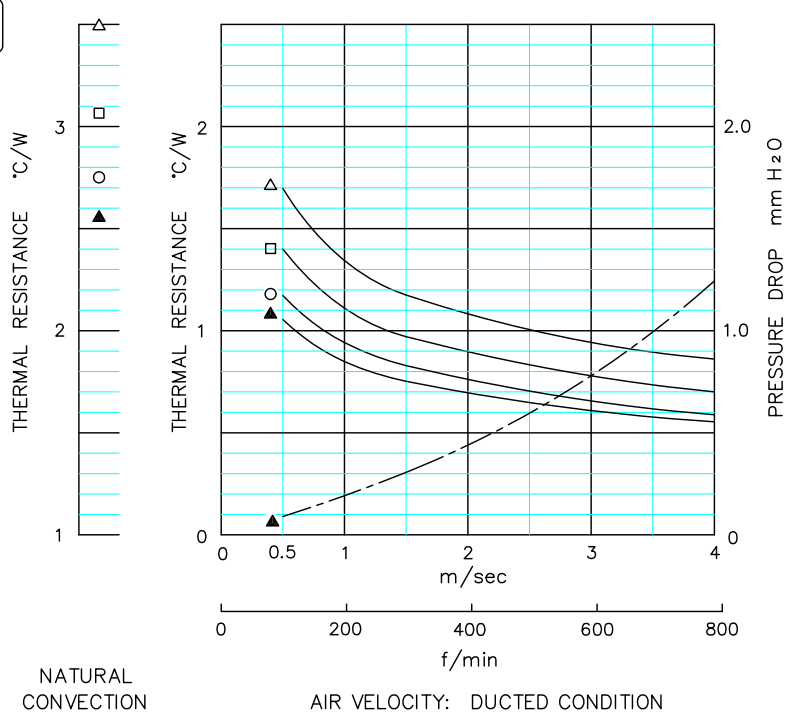
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LPD80S-15B	15	103.6
LPD80S-20B	20	113.9
LPD80S-25B	25	124.1
LPD80S-30B	30	134.4

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

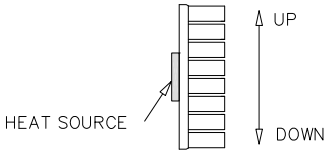
DATA



△ LPD80S-15B
□ LPD80S-20B
○ LPD80S-25B
▲ LPD80S-30B

DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ——————
PRESURE DROP —— - ——

NATURAL CONVECTION
DUMMY HEATER SIZE: 25.4 SQ
DISSPATED POWER: 16.0(W)



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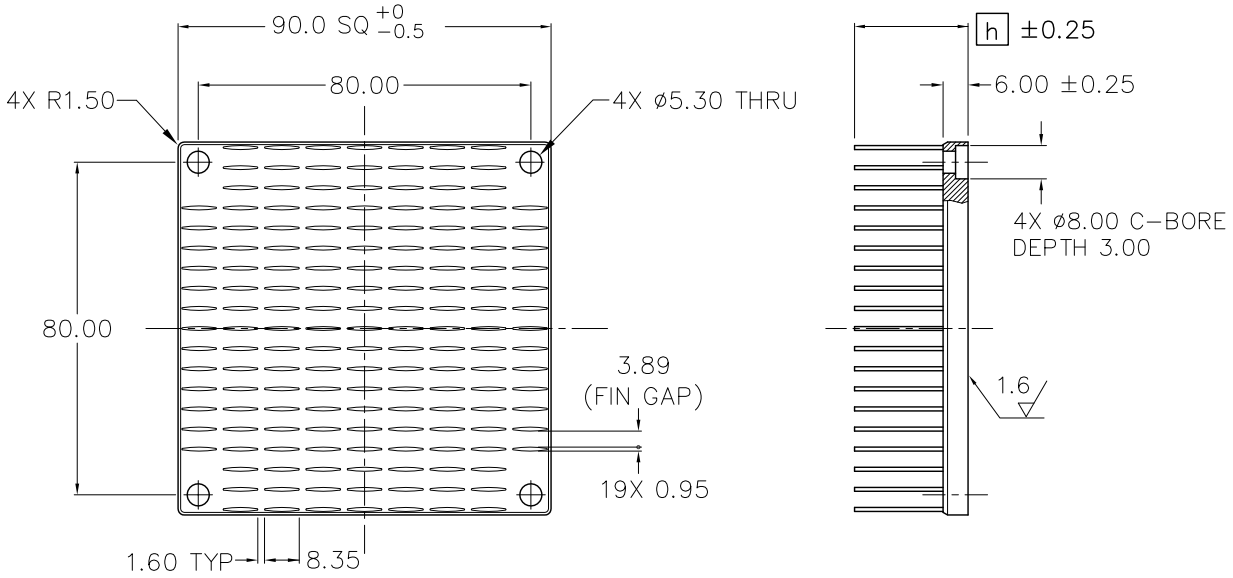
ALPHA

Low Pressure Drop Heat Sink with attachment holes

LPD90S

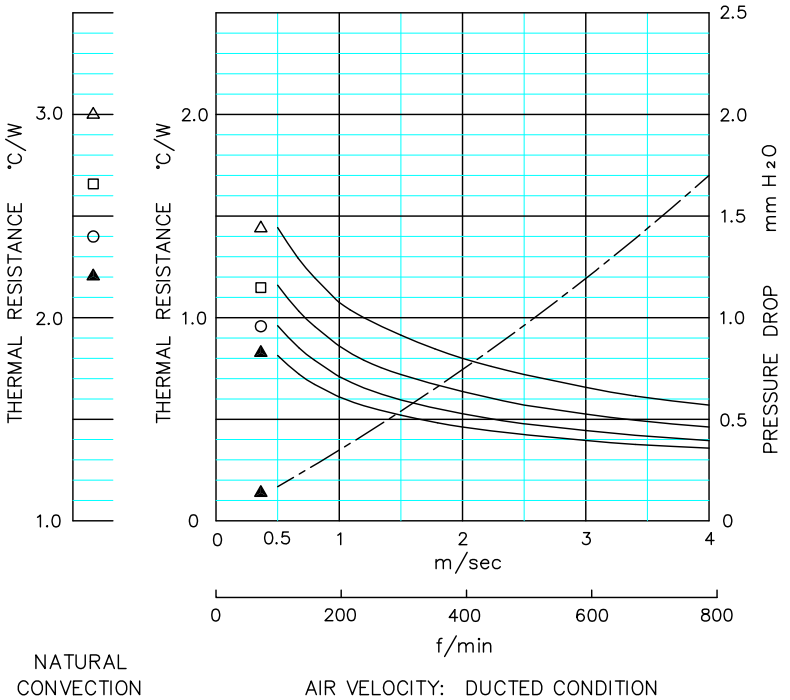
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LPD90S−15B	15	150.9
LPD90S−20B	20	164.0
LPD90S−25B	25	177.1
LPD90S−30B	30	190.2

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

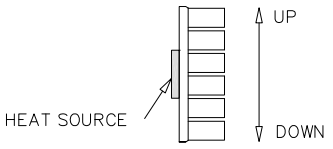


△ LPD90S−15B
□ LPD90S−20B
○ LPD90S−25B
▲ LPD90S−30B

NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

- DUCTED CONDITION
  DUMMY HEATER SIZE: 25.4 SQ
  THERMAL RESISTANCE ——————
  PRESURE DROP —— - ——
- NATURAL CONVECTION
  DUMMY HEATER SIZE: 25.4 SQ
  DISSPATED POWER: 18.6(W)



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  REFER TO TECHNICAL INFORMATION.

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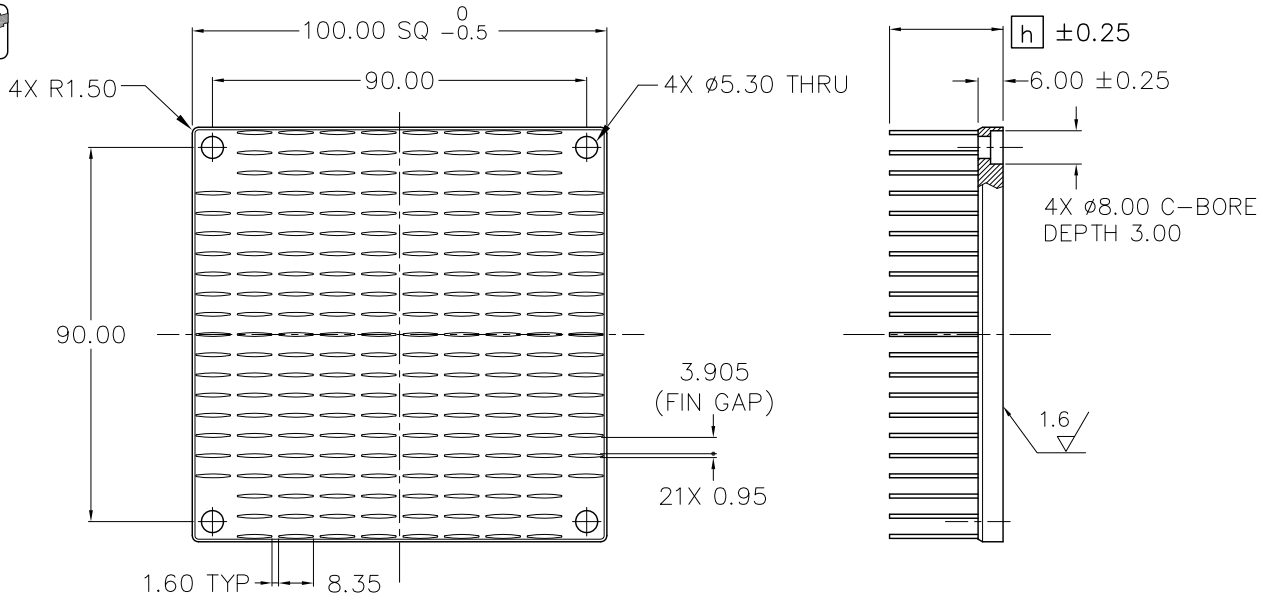
ALPHA

Low Pressure Drop Heat Sink
with attachment holes

LPD100S

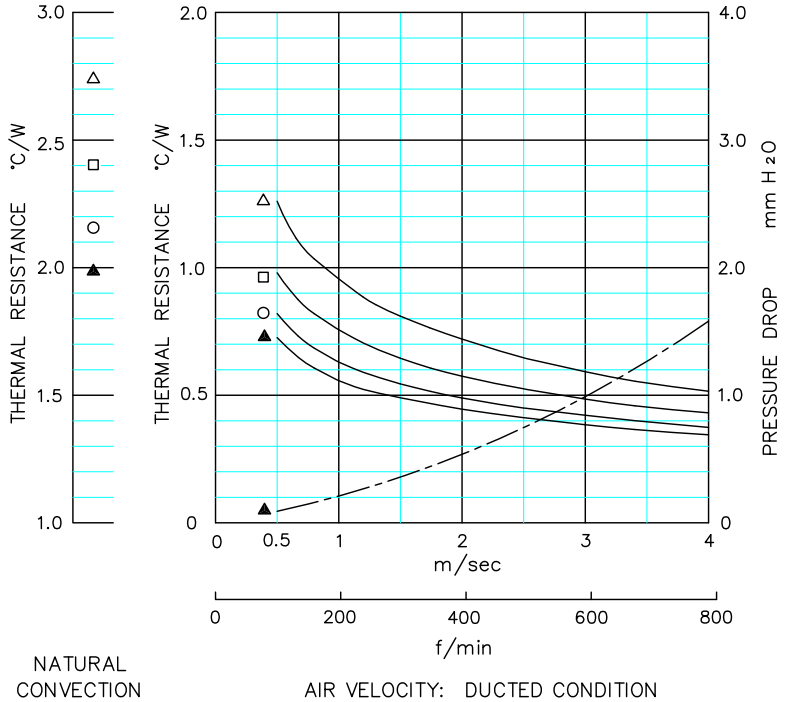
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LPD100S−15B	15	187.3
LPD100S−20B	20	203.7
LPD100S−25B	25	220.0
LPD100S−30B	30	236.4

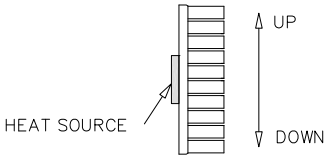
MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



△ LPD100S−15B
□ LPD100S−20B
○ LPD100S−25B
▲ LPD100S−30B

- DUCTED CONDITION
  DUMMY HEATER SIZE: 25.4 SQ
  THERMAL RESISTANCE ——————
  PRESURE DROP —— - ——
- NATURAL CONVECTION
  DUMMY HEATER SIZE: 25.4 SQ
  DISSPATED POWER: 20.6(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

- BASED ON ALPHA'S STANDARD TEST PROCEDURE.
  REFER TO TECHNICAL INFORMATION.

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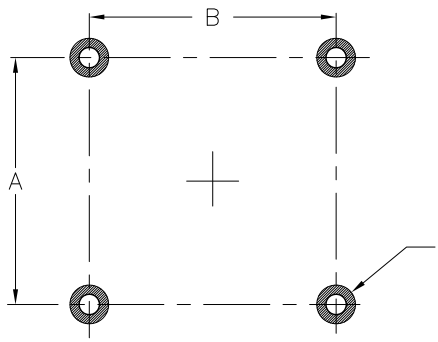
REF

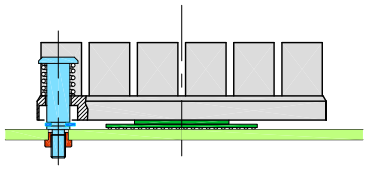
BOARD KEEPOUT PATTERNS



LPD80S AND UB80S	70.0	70.0
LPD90S AND UB90S	80.0	80.0
LPD100S AND UB100S	90.0	90.0
MODEL	A	B

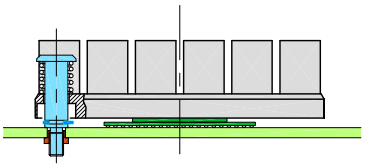
INSTALLATION

USE *PEM SMTSO-M3-***



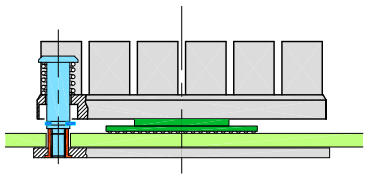
REQUIRES ø4.22 THRU HOLES IN BOARD.
PEM NUTS NEED THE SOLDERING.

USE *MAC8 TH-1.6-**-M3*



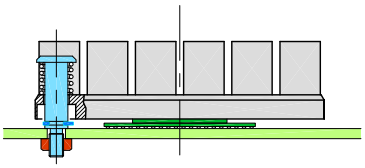
REQUIRES ø3.70 THRU HOLES IN BOARD.
MAC8 THREAD INSERT NEED THE SOLDERING.
RECOMMENDED P.C.B THICKNESS
MIN 1.6mm ~ MAX 3.7mm

USE *ALPHA STANDARD BACKING PLATE*



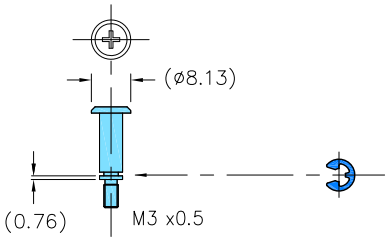
REQUIRES ø4.80 THRU HOLES IN BOARD.

USE *HEX NUTS M3x0.5*



REQUIRES ø3.30 THRU HOLES IN BOARD.

SHOULDER-SCREW / RETAINING RING E-3.0



REFER TO THE DRAWING FOR DETAIL SPECIFICATION.