

LCBM Series LCBH Series

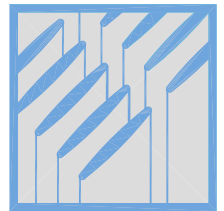
Low Pressure Drop Heat Sink
with Counterbored Attachment Holes

ALPHA

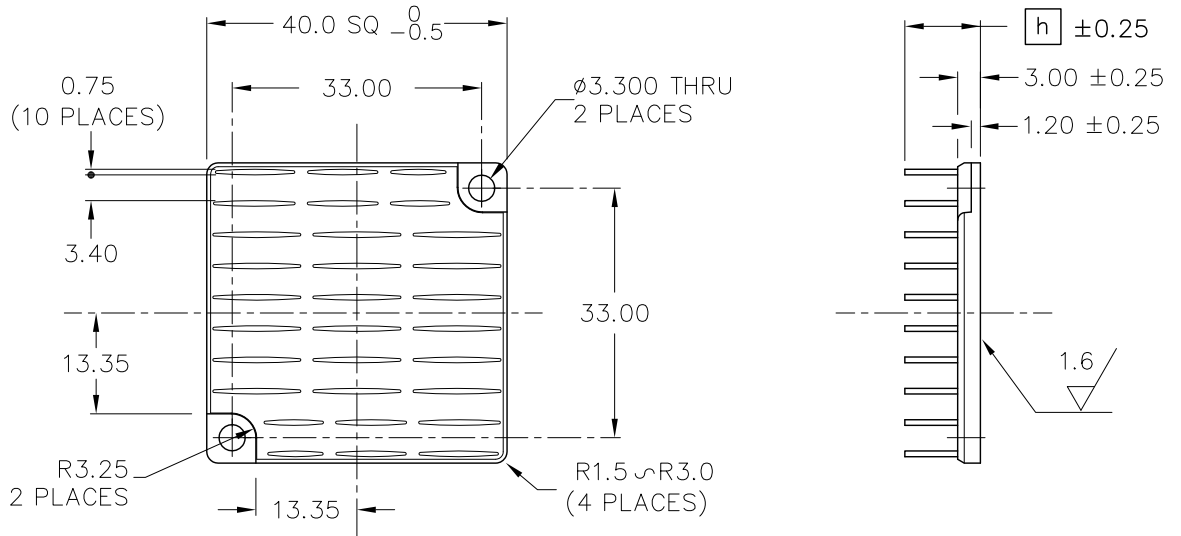
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBM40



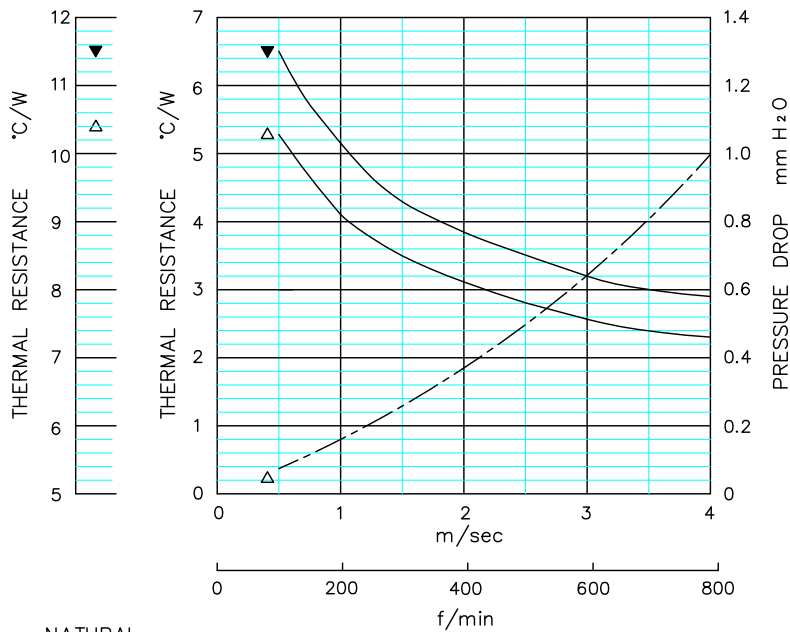
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBM40-7B	7	14.4
LCBM40-10B	10	16.0

MATERIAL : A 6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA

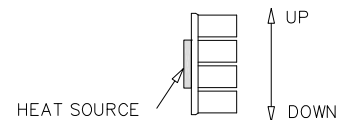


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ LCBM40-7B
 △ LCBM40-10B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE: ———
 PRESSURE DROP: - - - - -
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 6.0(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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

Alpha Company Ltd.

256-1 UEDA, NUMAZU-CITY SHIZUOKA-PREF., JAPAN
 PHONE +81(55)966 0789
 FAX +81(55)966 9192
 E mail : alpha@micforg.co.jp
 URL : http://www.micforg.co.jp

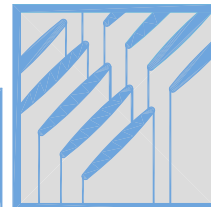
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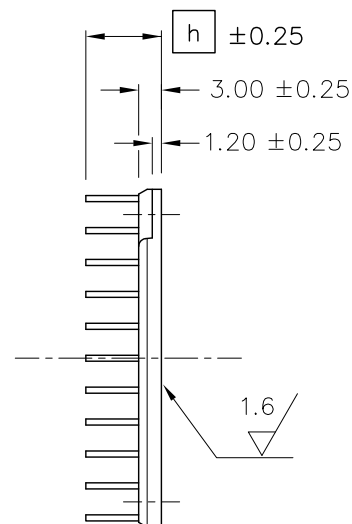
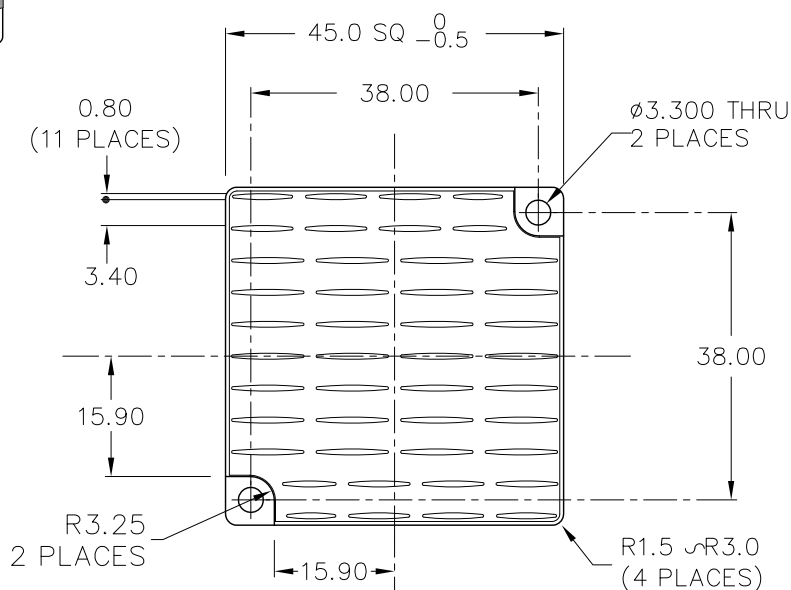
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBM45



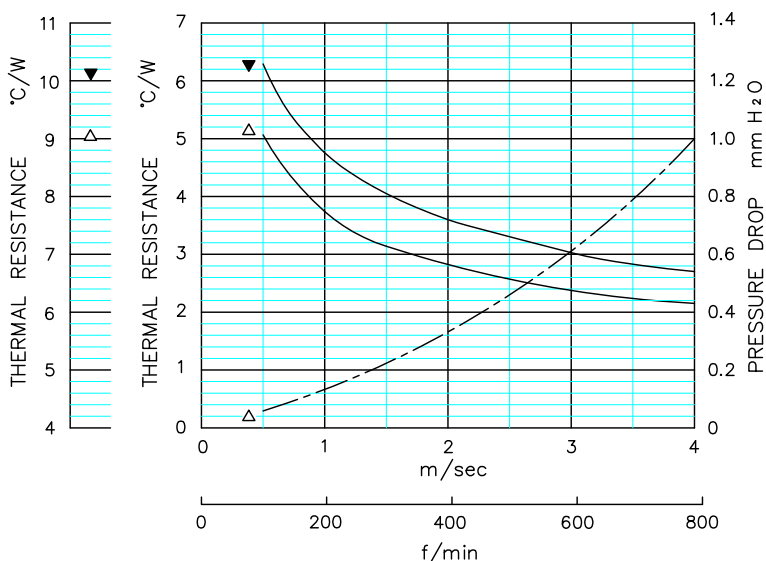
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LCBM45-7B	7	18.4
LCBM45-10B	10	20.5

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

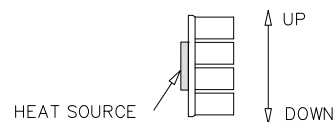


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ LCBM45-7B
△ LCBM45-10B

- DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ———
PRESSURE DROP - - - - -
- NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSIPATED POWER: 7.5(W)



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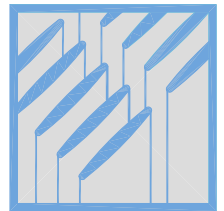
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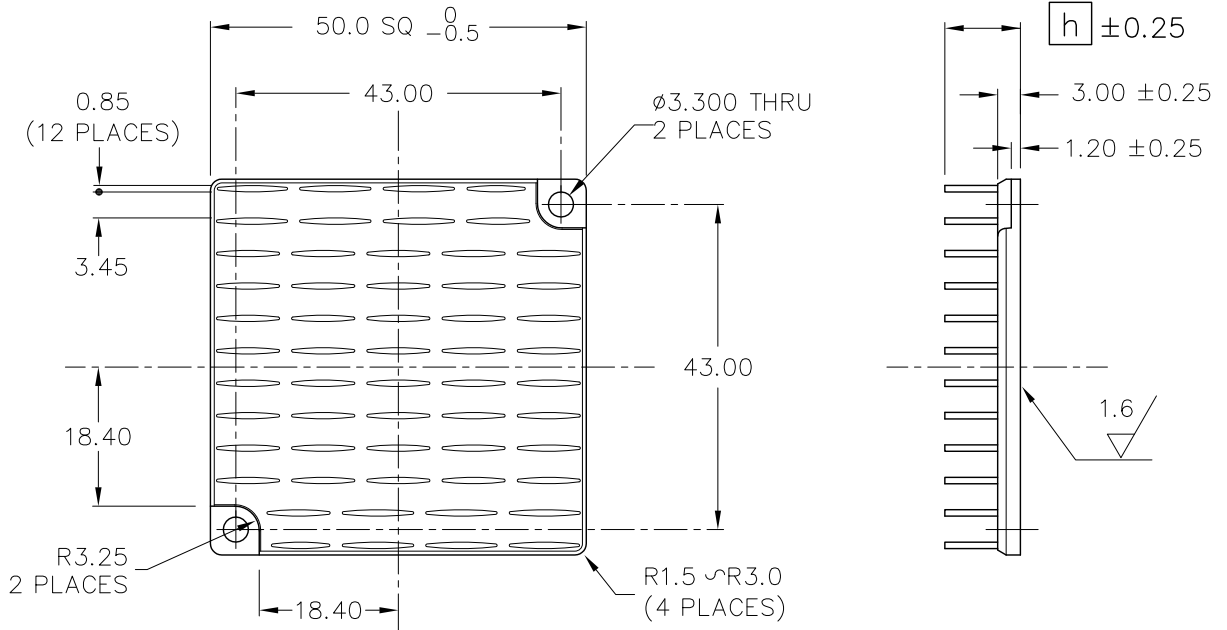
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBM50



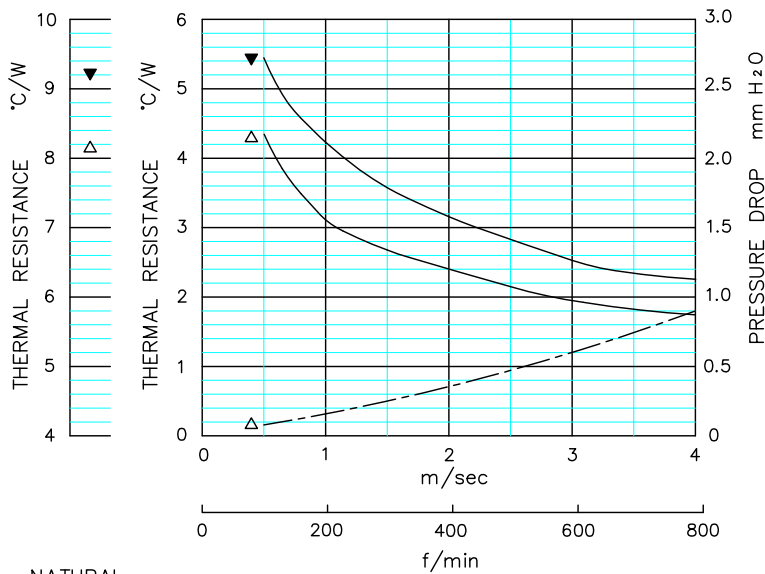
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBM50-7B	7	23.0
LCBM50-10B	10	25.6

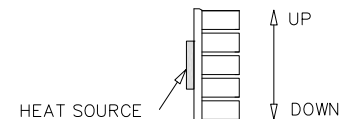
MATERIAL : A 6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



▼ LCBM50-7B
 △ LCBM50-10B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE ———
 PRESURE DROP - - - - -
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 8.0(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

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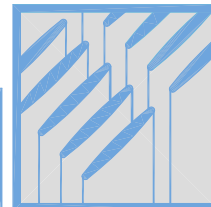
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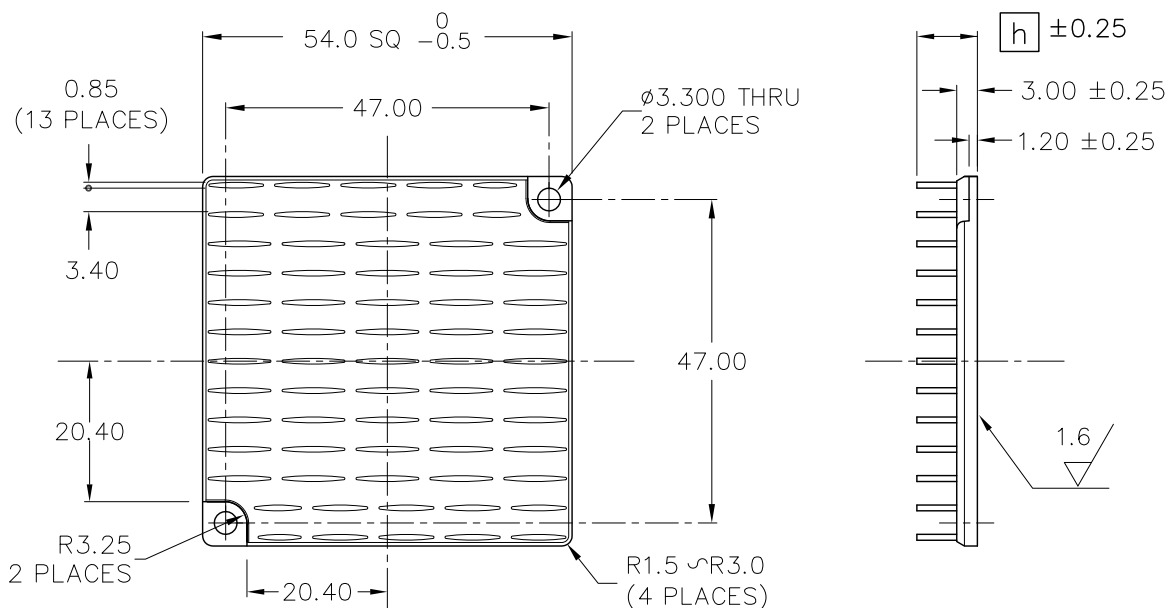
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBM54



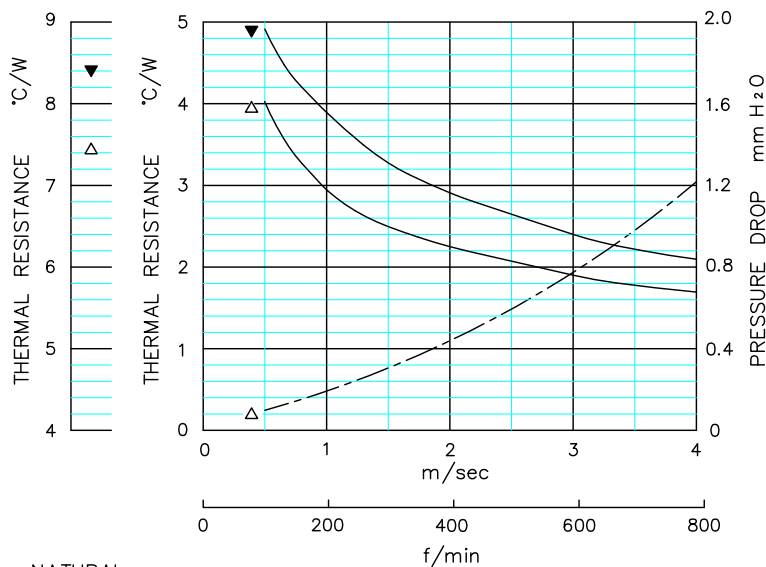
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBM54-7B	7	27.0
LCBM54-10B	10	30.0

MATERIAL : A 6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



▼ LCBM54-7B
 △ LCBM54-10B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE ———
 PRESURE DROP - - - - -
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 8.3(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

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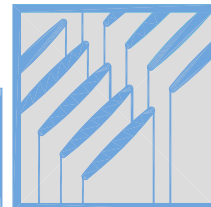
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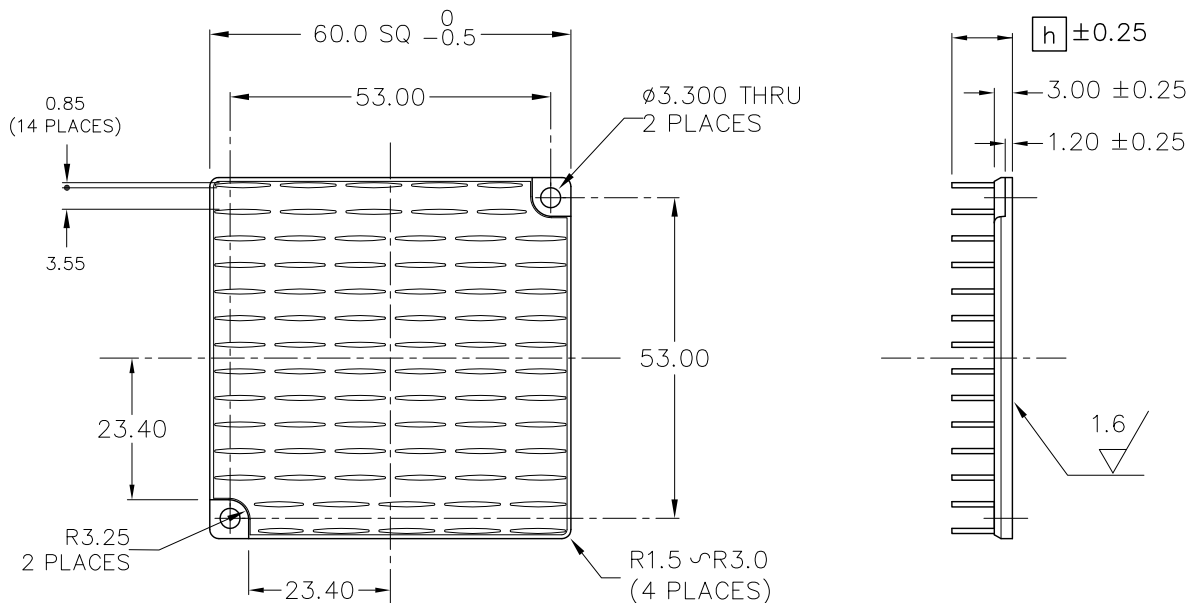
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBM60



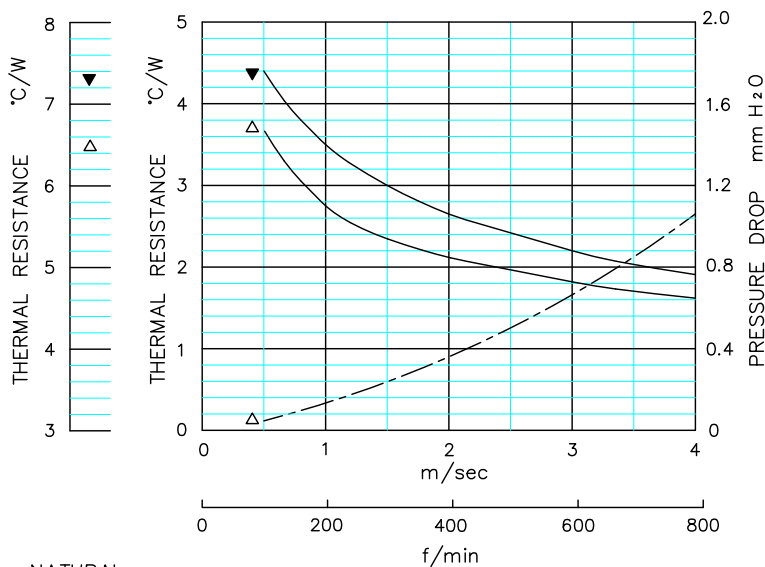
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LCBM60-7B	7	33.3
LCBM60-10B	10	37.0

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

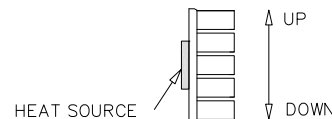


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ LCBM60-7B
△ LCBM60-10B

- DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ———
PRESSURE DROP - - - - -
- NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSIPATED POWER: 9.9(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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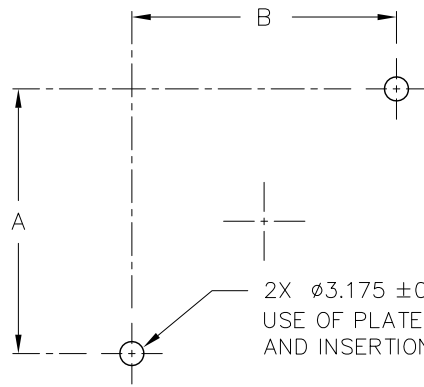
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E mail : sales@alphanovatech.com
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REF



PCB HOLE LAYOUT



2X $\phi 3.175 \pm 0.05$ [$\phi .125 \pm .002$]

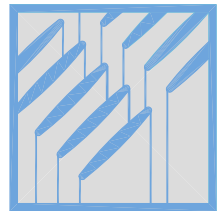
USE OF PLATED HOLES TO REDUCE EXCESSIVE WEAR
AND INSERTION FORCE IS RECOMMENDED.

LCBM40, UCBM40	33.0	33.0
LCBM45, UCBM45	38.0	38.0
LCBM50, UCBM50	43.0	43.0
LCBM54, UCBM54	47.0	47.0
LCBM60, UCBM60	53.0	53.0
MODEL	A	B

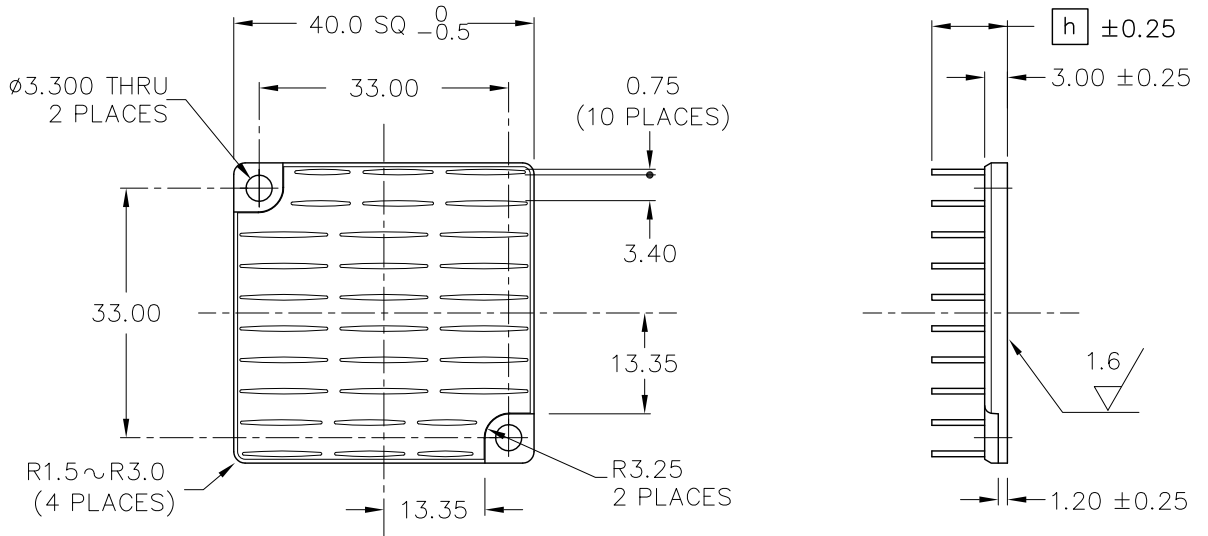
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBH40



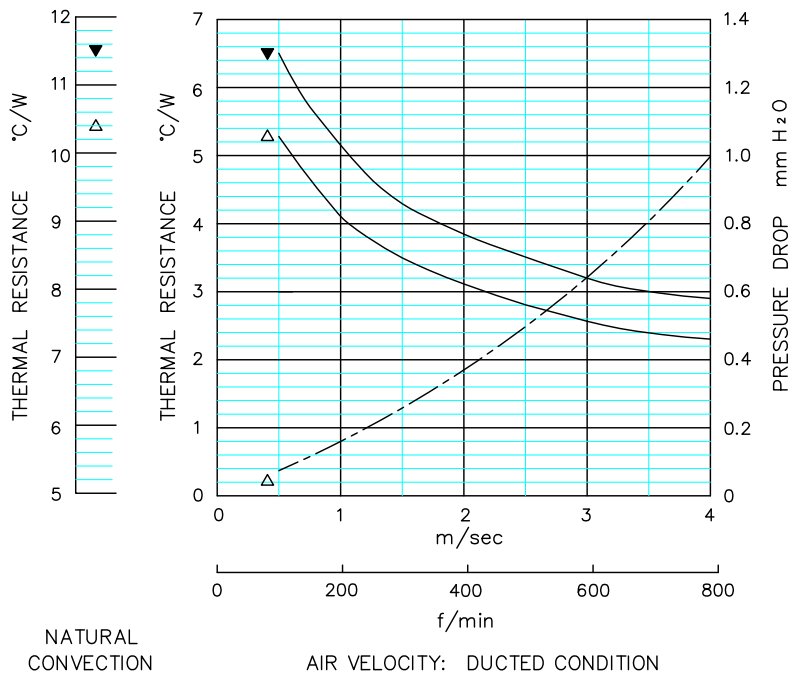
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBH40-7B	7	14.4
LCBH40-10B	10	16.0

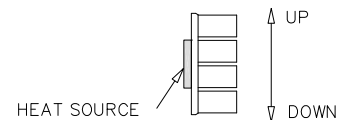
MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



▼ LCBH40-7B
△ LCBH40-10B

- DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE (solid line)
PRESSURE DROP (dashed line)
- NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSIPATED POWER: 6.0(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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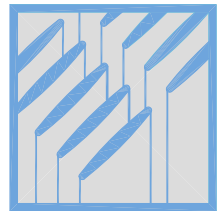
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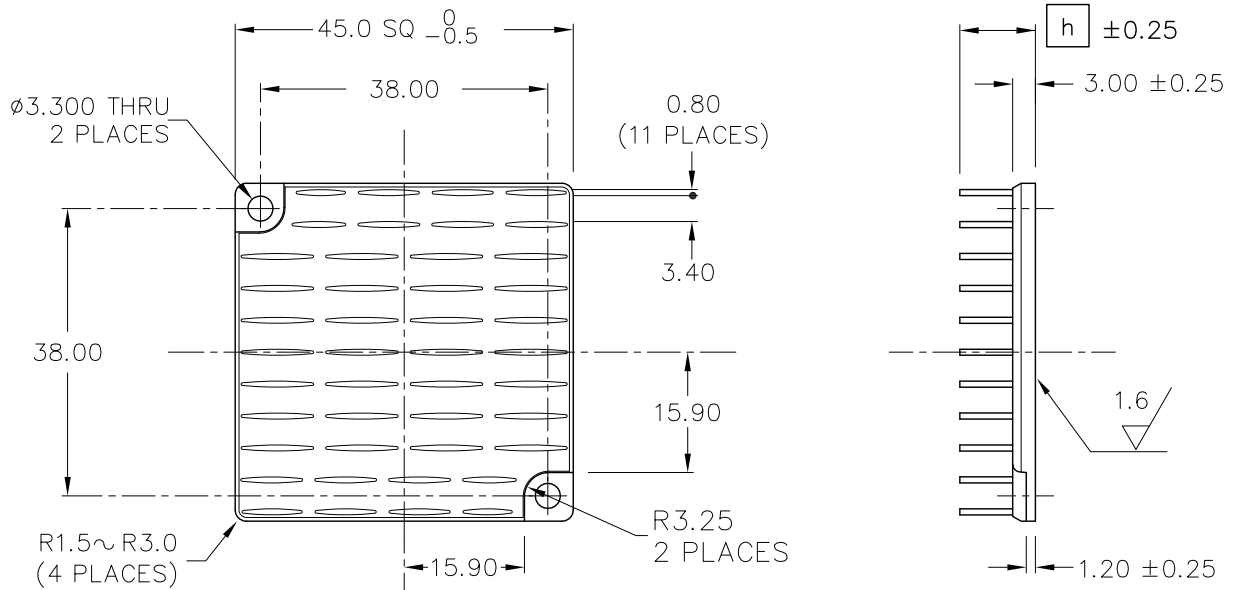
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBH45



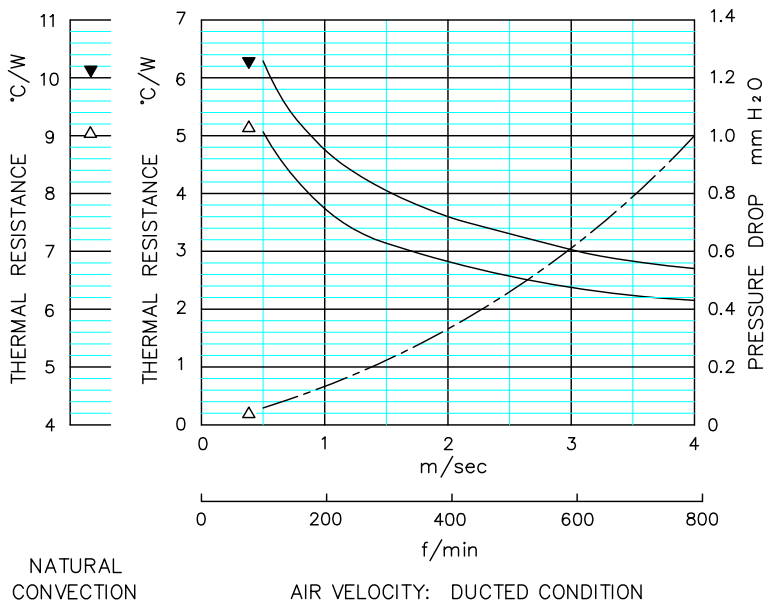
DIM



MODEL	HEIGHT [h]	WEIGHT (grams)
LCBH45-7B	7	18.4
LCBH45-10B	10	20.5

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA



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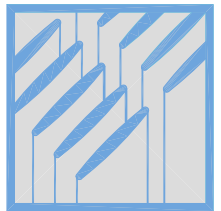
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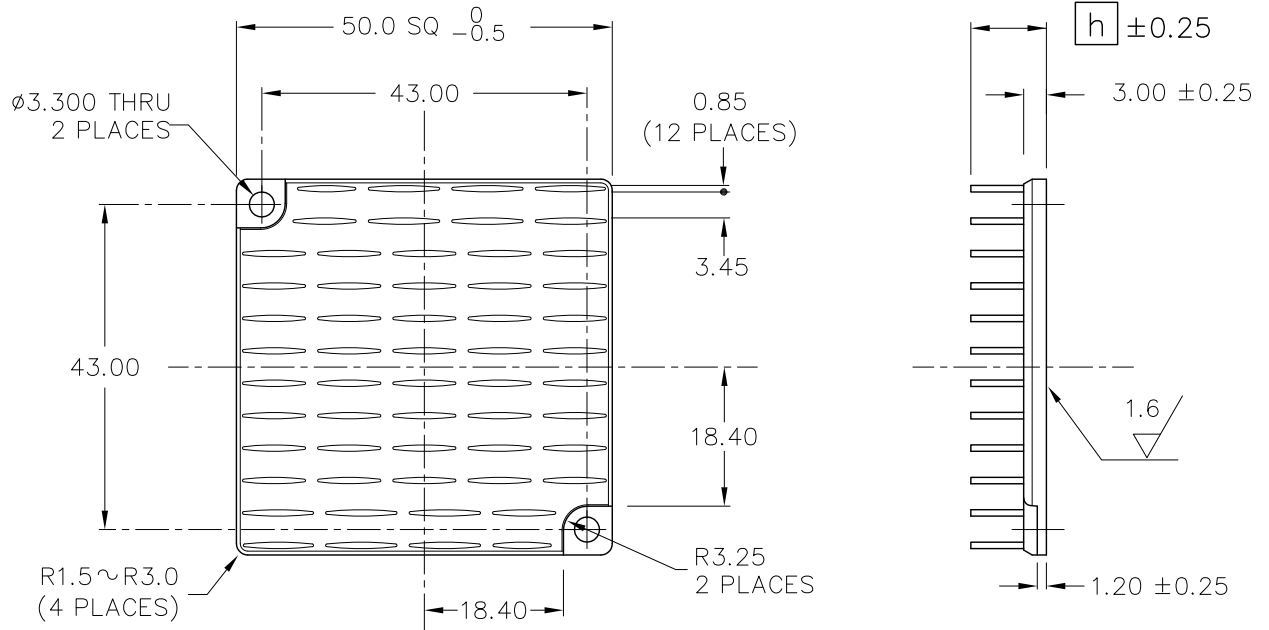
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBH50



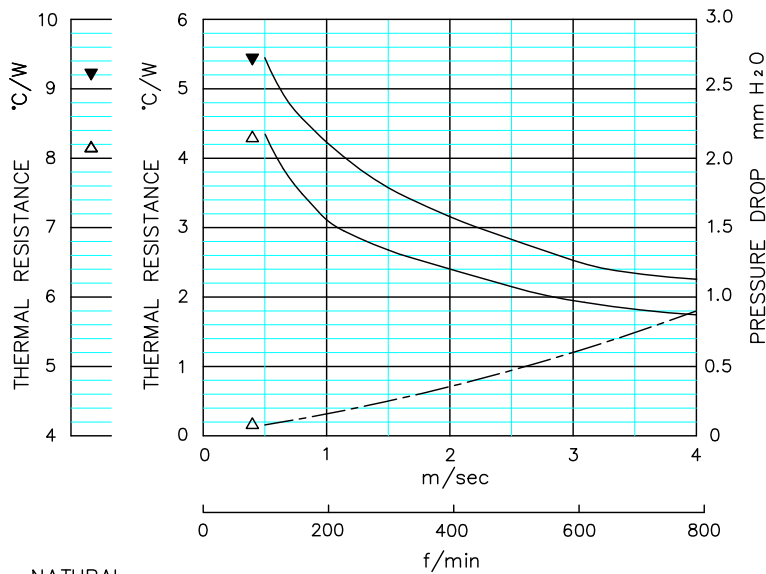
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBH50-7B	7	23.0
LCBH50-10B	10	25.6

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

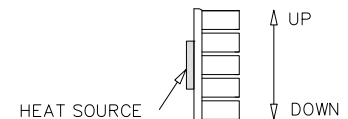


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ LCBH50-7B
△ LCBH50-10B

- DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE ———
PRESSURE DROP - - - - -
- NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSIPATED POWER: 8.0(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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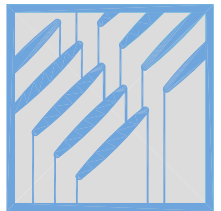
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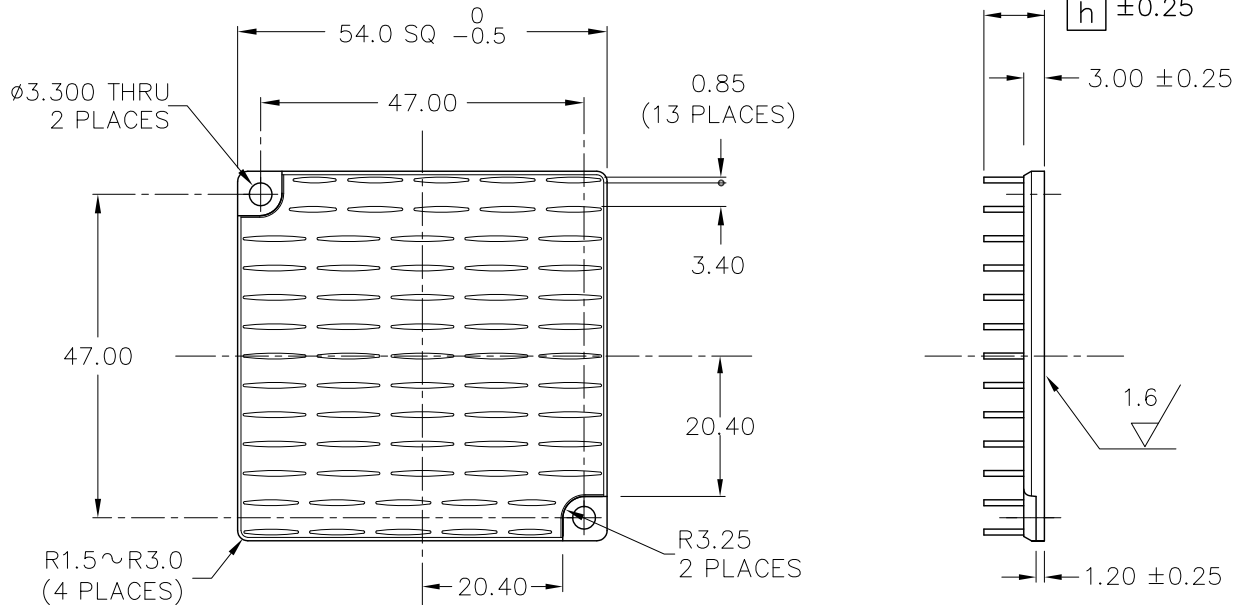
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBH54



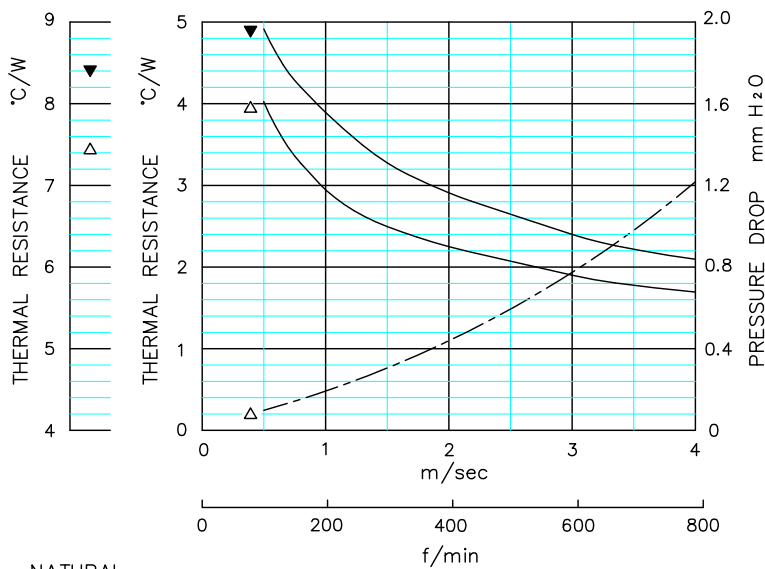
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBH54-7B	7	27.0
LCBH54-10B	10	30.0

MATERIAL : A 6063
FINISH : BLACK ANODIZE
DIMENSIONS : mm

DATA

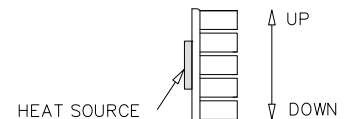


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

▼ LCBH54-7B
△ LCBH54-10B

- DUCTED CONDITION
DUMMY HEATER SIZE: 12.7 SQ
THERMAL RESISTANCE (solid line)
PRESURE DROP (dashed line)
- NATURAL CONVECTION
DUMMY HEATER SIZE: 12.7 SQ
DISSPATED POWER: 8.3(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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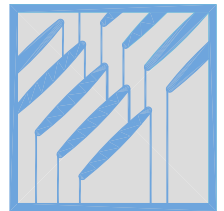
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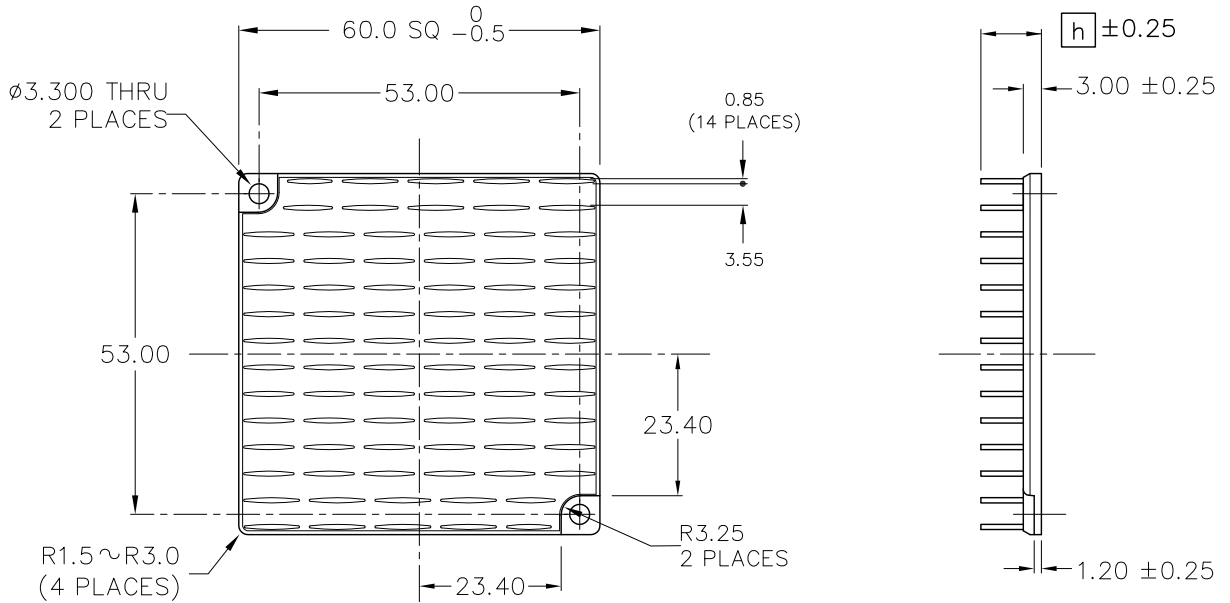
ALPHA

Low Pressure Drop and
Low Thermal Resistance Heat Sink
with counterbored attachment holes

LCBH60



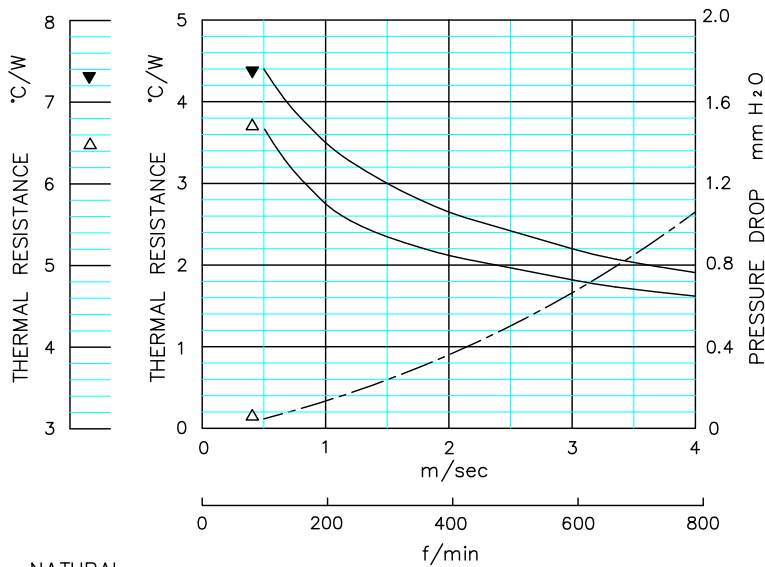
DIM



MODEL	HEIGHT h	WEIGHT (grams)
LCBH60-7B	7	33.3
LCBH60-10B	10	37.0

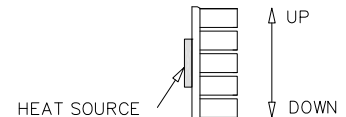
MATERIAL : A 6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



▼ LCBH60-7B
 △ LCBH60-10B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE (solid line)
 PRESSURE DROP (dashed line)
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 9.9(W)



NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

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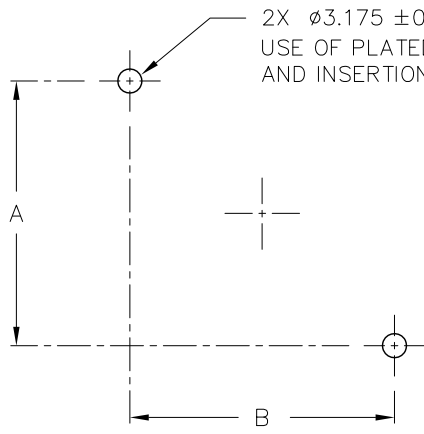
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REF



PCB HOLE LAYOUT



2X $\phi 3.175 \pm 0.05$ [$\phi .125 \pm .002$]
 USE OF PLATED HOLES TO REDUCE EXCESSIVE WEAR
 AND INSERTION FORCE IS RECOMMENDED.

LCBH40, UCBH40	33.0	33.0
LCBH45, UCBH45	38.0	38.0
LCBH50, UCBH50	43.0	43.0
LCBH54, UCBH54	47.0	47.0
LCBH60, UCBH60	53.0	53.0
MODEL	A	B