



LINEAR MOTOR LMU050

With in the LMU series, this model has the most force.  
This model is suitable for applications where high amount of force, high speed, and quick acceleration are required for operation, such as large scale production equipement and precision positioning equipment.

Standard Specifications

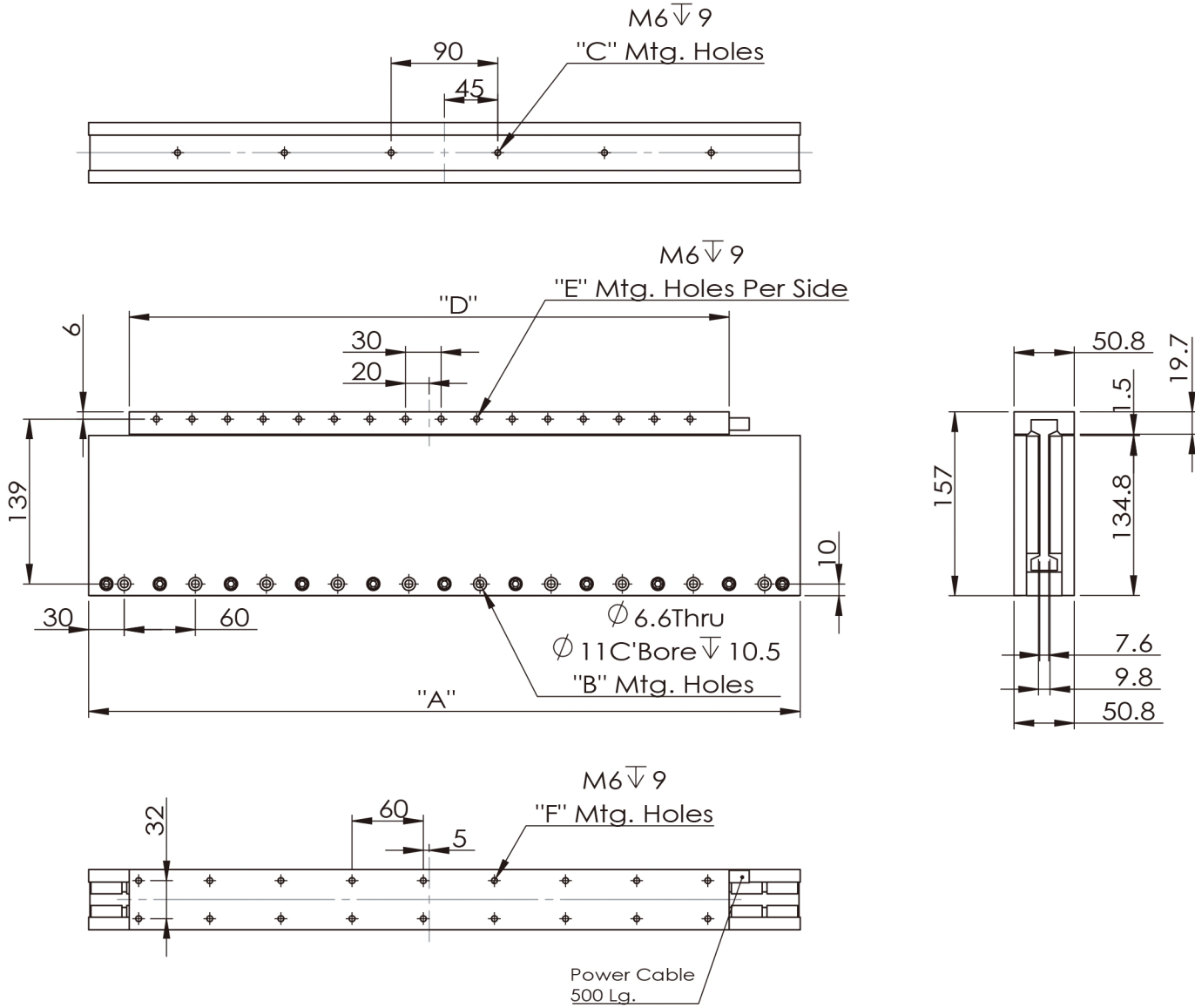
|                                                |                           |
|------------------------------------------------|---------------------------|
| Insulation Capacity                            | : AC1500V 1min            |
| Operating Range                                | : 0~25°C                  |
| Cooling Method                                 | : Self-cool               |
| Insulation Resistance                          | : DC500V 100MΩ or more    |
| Operating range<br>(in controlled environment) | : 20~80%(No condensation) |
| Maximum temperature                            | : 125°C                   |

Specification

| Parameter                     | Unit            | LMU050-CP384 |        | LMU050-CP504 |       |
|-------------------------------|-----------------|--------------|--------|--------------|-------|
|                               |                 | A            | B      | B            | C     |
| Performance Specifications    |                 |              |        |              |       |
| Continuous Force              | N               | 550          |        | 700          |       |
| Peak Force                    | N               | 3850         |        | 4900         |       |
| Electrical Specifications     |                 |              |        |              |       |
| BEMF Constant(line-line,peak) | V/(m/s)         | 203.02       | 101.51 | 135.91       | 67.95 |
| Continuous Current            | Arms            | 2.20         | 4.40   | 4.20         | 8.41  |
| Peak Current,Stall            | Arms            | 15.42        | 30.83  | 29.40        | 58.87 |
| Force Constant                | N/Arms          | 249.71       | 124.86 | 166.47       | 83.23 |
| Motor Constant                | N/√W            | 37.06        |        | 48.30        |       |
| Resistance,25°C (line-line)   | Ω               | 20.39        | 5.1    | 6.8          | 1.7   |
| Inductance,(line-line)        | mH              | 12           | 3      | 4            | 1     |
| Thermal Resistance            | °C/W            | 0.4          |        | 0.39         |       |
| Maximum Bus Voltage           | V <sub>DC</sub> | 340          |        | 340          |       |
| Mechanical Specifications     |                 |              |        |              |       |
| Coil Weight                   | kg              | 3.4          |        | 4.45         |       |
| Coil Length                   | mm              | 384          |        | 504          |       |
| Magnet Track Weight           | kg/m            | 38.1         |        |              |       |
| Magnetic Pole Pitch (NN)      | mm              | 60           |        |              |       |

- Notes :
- 1.Performance is dependent upon heat sink configuration, system cooling conditions,and ambient temperature.
  - 2.Values shown @ 100°C rise above a 25°C ambient temperature,with motor mounted to the specified aluminum heat sink.
  - 3.Peak force assumes correct rms current;consult SMJ.
  - 4.Force constant and motor constant specified at stall.
  - 5.All performance and electrical specifications±10%.

Dimensions(mm)



|              |     |   |   |
|--------------|-----|---|---|
| Magnet Plate |     |   |   |
| Model No.    | A   | B | C |
| LMU050-MP240 | 240 | 4 | 2 |
| LMU050-MP300 | 300 | 5 | 4 |

|              |     |    |    |
|--------------|-----|----|----|
| Coil Plate   |     |    |    |
| Model No.    | D   | E  | F  |
| LMU050-CP384 | 384 | 12 | 14 |
| LMU050-CP504 | 504 | 16 | 18 |