

# MARUT M G2

## DATASHEET | SPECIFICATIONS



### TECHNICAL SPECIFICATIONS

| ELECTRICAL PARAMETERS         |   |
|-------------------------------|---|
| Light source                  | » LED   |
| AC voltage                    | » AC 220–240 V / 50–60 Hz   |
| Connection                    | » leading out cable » leading out cable with connector (G) » without cable (WO)   |
| Driver                        | » electronic driver with surge protection L/N-Ground 10 kV  |
| Surge protection              | » additional surge protection 10 kV (S)   |
| Fuse                          | » fuse 6,3 A (J)  |
| Dimming                       | » non-dimmable (not labeled) » DALI (DALI) » night dimming (A)<br>» preparation for wireless communication NEMA (N) » Zhaga (Z)                         |
| Constant lumen output         | » CLO (C)   |
| LIGHT PARAMETERS              |   |
| Optical system                | » roads (Mxx) » roads (Lxx) » directional (Pxx) » area (Uxx)<br>» combined optics (Kxx) » BACK light shades (BL1/BL2)<br>» FRONT light shades (FL1/FL2) |
| Light distribution            | » direct  |
| Color rendering index         | » Ra > 70 » Ra > 80   |
| Color temperature             | » BLUE FREE (AMBER) » 2 200 K » 2 700 K » 3 000 K » 4 000 K » 5 000 K<br>» 5 700 K » TW   |
| Service life                  | » > 100 000 hours (L90B10)  |
| CONSTRUCTION                  |   |
| Housing                       | » aluminum cast   |
| Color                         | » RAL 7015/9006   |
| Surface                       | » matte   |
| Cover                         | » tempered glass  |
| SAFETY                        |   |
| Protection class              | » I » II  |
| Ambient operating temperature | » -40 / +55 °C  |
| Ingress protection            | » IP 66   |
| Impact protection             | » IK 09   |
| EMC                           | » YES   |
| Vibration test                | » YES   |
| Certification                 | » ENEC » ENEC+ » Zhaga-D4i » IDA Dark Sky Approved  |
| RoHS                          | » YES   |
| REACH                         | » YES   |
| MOUNTING                      |   |
| Method                        | » pole or outrigger (48–60 mm) » adapter (60–76) (on request)<br>» adjustable joint ± 15°   |
| Recommended height            | » up to 8 m   |
| Additional equipment          | » EXTERNAL shades CPZ (on order)  |

### CHARACTERISTIC

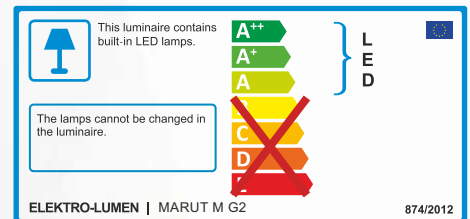
Elegant outdoor LED luminary with an integrated surge protection and adjustable joint with the possibility of integration into “Smart City”.

### USE

Road classes I., II. and III.

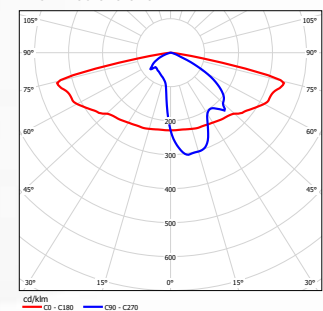
Pedestrian zones Outdoor areas

Sidewalks Cycle paths



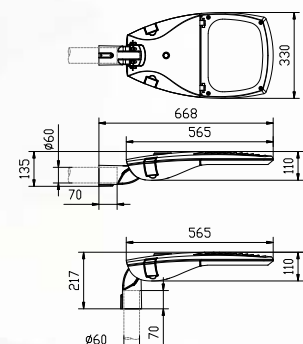
### LIGHT DISTRIBUTION CURVE

MARUT M G2 M03 8k0 840



### DIMENSIONS

MARUT M G2



# VARIANTS

## DATASHEET MARUT M G2

| VARIANTS<br>(chip 3535) | POWER (W)             |                  |                  |                  | LUMINAIRE OUTPUT<br>FLUX (lm) |        | LUMINAIRE<br>EFFICIENCY<br>(lm/W) | SERVICE LIFE<br>(hrs.) | WEIGHT |
|-------------------------|-----------------------|------------------|------------------|------------------|-------------------------------|--------|-----------------------------------|------------------------|--------|
|                         | Color temperature (K) |                  |                  |                  |                               |        |                                   |                        |        |
| Catalog name            | 2200K<br>(Ra 70)      | 2700K<br>(Ra 70) | 3000K<br>(Ra 70) | 4000K<br>(Ra 70) | min                           | max    | Up to                             | L90B10                 | kg*    |
| MARUT M G2 Mxx 2k0      | 14,5                  | 12,8             | 12,3             | 11,7             | 1 673                         | 1 851  | 158,2                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 3k0      | 22,6                  | 19,5             | 18,3             | 17,5             | 2 510                         | 2 776  | 158,6                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 4k0      | 30,6                  | 27,1             | 25,1             | 23,9             | 3 346                         | 3 701  | 154,9                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 5k0      | 39,6                  | 34,3             | 32,1             | 30,6             | 4 183                         | 4 627  | 151,2                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 6k0      | 42,7                  | 42,6             | 39,5             | 37,4             | 5 020                         | 5 552  | 148,4                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 7k0      | 50,9                  | 44,2             | 41,6             | 39,2             | 5 856                         | 6 477  | 165,2                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 8k0      | 59,5                  | 51,4             | 48,2             | 45,4             | 6 693                         | 7 402  | 163,0                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 9k0      | 68,2                  | 59               | 55,4             | 52,3             | 7 529                         | 8 328  | 159,2                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 10k0     | 78                    | 66,6             | 62,5             | 58,9             | 8 366                         | 9 253  | 157,1                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 12k0     | -                     | 83,9             | 77,8             | 72,9             | 10 039                        | 11 104 | 152,3                             | > 100 000              | 6.7    |
| MARUT M G2 Mxx 14k0     | -                     | -                | -                | 87,3             | 11 712                        | 12 954 | 148,4                             | > 100 000              | 6.7    |

| VARIANTS<br>(chip 5050) | POWER (W)             |                  |                  |                  |                  | LUMINAIRE OUTPUT<br>FLUX (lm) |        | LUMINAIRE<br>EFFICIENCY<br>(lm/W) | SERVICE LIFE<br>(hrs.) | WEIGHT |
|-------------------------|-----------------------|------------------|------------------|------------------|------------------|-------------------------------|--------|-----------------------------------|------------------------|--------|
|                         | Color temperature (K) |                  |                  |                  |                  |                               |        |                                   |                        |        |
| Catalog name            | BLUE FREE<br>(AMBER)  | 2200K<br>(Ra 70) | 2700K<br>(Ra 70) | 3000K<br>(Ra 70) | 4000K<br>(Ra 70) | min                           | max    | Up to                             | L90B10                 | kg*    |
| MARUT M G2 Lxx 2k0      | 14,2                  | 13,7             | 12,6             | 12               | 11,4             | 1 750                         | 1 892  | 166,0                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 3k0      | 21,1                  | 20,7             | 18,9             | 17,7             | 16,9             | 2 625                         | 2 837  | 167,9                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 4k0      | 28,2                  | 27,6             | 25,5             | 23,6             | 22,6             | 3 500                         | 3 783  | 167,4                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 5k0      | 35,8                  | 35,1             | 32,3             | 29,8             | 28,2             | 4 375                         | 4 729  | 167,7                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 6k0      | 39,9                  | 39,1             | 39,4             | 36,3             | 34,3             | 5 249                         | 5 675  | 165,5                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 7k0      | 46,6                  | 46,2             | 42,3             | 39               | 37,2             | 6 124                         | 6 621  | 178,0                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 8k0      | 54,1                  | 53,7             | 48,4             | 44,7             | 42,5             | 6 999                         | 7 566  | 178,0                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 9k0      | 61,9                  | 60,6             | 55,4             | 51,2             | 48,3             | 7 874                         | 8 512  | 176,2                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 10k0     | 69,9                  | 68,5             | 62,3             | 57,4             | 54,3             | 8 749                         | 9 458  | 174,2                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 12k0     | -                     | -                | 76,9             | 70,8             | 66,7             | 10 499                        | 11 350 | 170,2                             | > 100 000              | 6.7    |
| MARUT M G2 Lxx 14k0     | -                     | -                | -                | -                | 79,8             | 12 249                        | 13 241 | 165,9                             | > 100 000              | 6.7    |

\* The weight may vary slightly depending on the luminaire variant.

|   |
|---|
| Luminaire ambient temperature TQ 25 °C  |
| Initial color consistency: ≤ 5 SDCM   |
| Optical and electrical parameters tolerance ± 10 %                                    |
| IDA Dark Sky fixture seal of approval relates to ≤ 3 000 K                            |
| To meet IDA requirements, the luminaires must be installed horizontally with the road |

When using the CLO function, the initial power and luminous flux is 10 % lower than the value shown in the table. LDT curves with CLO function have the letter "C" at the end of their marking.

The term BLUE FREE (AMBER) in lighting technology refers to light with a minimum amount of the blue part of the light spectrum (< 2%).

## CODE DESCRIPTION

| MARUT | M | II | G2 | M01BL2 | 8k0 | 730 | B124 | 45CAZ | SJG | H3S | ENEC |                                |   |
|-------|---|----|----|--------|-----|-----|------|-------|-----|-----|------|--------------------------------|---|
|       |   |    |    |        |     |     |      |       |     |     |      |                                |   |
|       |   |    |    |        |     |     |      |       |     |     |      | Name                           |   |
|       |   |    |    |        |     |     |      |       |     |     |      | Class                          |   |
|       |   |    |    |        |     |     |      |       |     |     |      | Without marking                | Class I   |
|       |   |    |    |        |     |     |      |       |     |     |      | II                             | Class II  |
|       |   |    |    |        |     |     |      |       |     |     |      | Luminaire generation           |   |
|       |   |    |    |        |     |     |      |       |     |     |      | Optical system                 |   |
|       |   |    |    |        |     |     |      |       |     |     |      | M01                            | Roads   |
|       |   |    |    |        |     |     |      |       |     |     |      | L01                            | Roads   |
|       |   |    |    |        |     |     |      |       |     |     |      | P01                            | Directional   |
|       |   |    |    |        |     |     |      |       |     |     |      | U01                            | Area  |
|       |   |    |    |        |     |     |      |       |     |     |      | ZP1/ZL1                        | Pedestrian crossings  |
|       |   |    |    |        |     |     |      |       |     |     |      | K01                            | Combined optics   |
|       |   |    |    |        |     |     |      |       |     |     |      | BL1/BL2                        | BACK Light shades   |
|       |   |    |    |        |     |     |      |       |     |     |      | Luminous flux marking (source) |   |
|       |   |    |    |        |     |     |      |       |     |     |      | Ra 70 / 3 000 K                |   |
|       |   |    |    |        |     |     |      |       |     |     |      | LED module marking             |   |
|       |   |    |    |        |     |     |      |       |     |     |      | B                              | LED module type   |
|       |   |    |    |        |     |     |      |       |     |     |      | 1                              |   |
|       |   |    |    |        |     |     |      |       |     |     |      | 2                              |   |
|       |   |    |    |        |     |     |      |       |     |     |      | 4                              | Mask type   |
|       |   |    |    |        |     |     |      |       |     |     |      | Driver type                    |   |
|       |   |    |    |        |     |     |      |       |     |     |      | 43                             | DALI driver + 3 pole terminal block                         |
|       |   |    |    |        |     |     |      |       |     |     |      | 45                             | DALI driver + 5 pole terminal block                         |
|       |   |    |    |        |     |     |      |       |     |     |      | 45P                            | DALI driver + 5 pole terminal block + presence detection    |
|       |   |    |    |        |     |     |      |       |     |     |      | 4                              | DALI driver   |
|       |   |    |    |        |     |     |      |       |     |     |      | 1                              | on/off driver   |
|       |   |    |    |        |     |     |      |       |     |     |      | D                              | D4i driver - (for Zhaga connector)                          |
|       |   |    |    |        |     |     |      |       |     |     |      | C                              | Constant luminous flux (CLO)                                |
|       |   |    |    |        |     |     |      |       |     |     |      | A                              | AstroDim  |
|       |   |    |    |        |     |     |      |       |     |     |      | Z                              | Zhaga connector, 4 pin (D4i driver)                         |
|       |   |    |    |        |     |     |      |       |     |     |      | N                              | NEMA connector, 7 pin (DALI driver)                         |
|       |   |    |    |        |     |     |      |       |     |     |      | S                              | Surge protection 10 kV                                      |
|       |   |    |    |        |     |     |      |       |     |     |      | J                              | Fuse 6,3 A  |
|       |   |    |    |        |     |     |      |       |     |     |      | G                              | Gesis connector   |
|       |   |    |    |        |     |     |      |       |     |     |      | H                              | H05(07)RN-F cable (1 mm <sup>2</sup> )                      |
|       |   |    |    |        |     |     |      |       |     |     |      | C                              | CYKY cable (1,5 mm <sup>2</sup> )                           |
|       |   |    |    |        |     |     |      |       |     |     |      | WO                             | Without cable   |
|       |   |    |    |        |     |     |      |       |     |     |      | 2                              | 2 core cable  |
|       |   |    |    |        |     |     |      |       |     |     |      | 3                              | 3 core cable  |
|       |   |    |    |        |     |     |      |       |     |     |      | 5                              | 5 core cable  |
|       |   |    |    |        |     |     |      |       |     |     |      | S                              | Standard – 25 cm length of cable (led out of the luminaire) |
|       |   |    |    |        |     |     |      |       |     |     |      | 1                              | 1 meter (length in whole meters)                            |
|       |   |    |    |        |     |     |      |       |     |     |      | ENEC certification             |   |