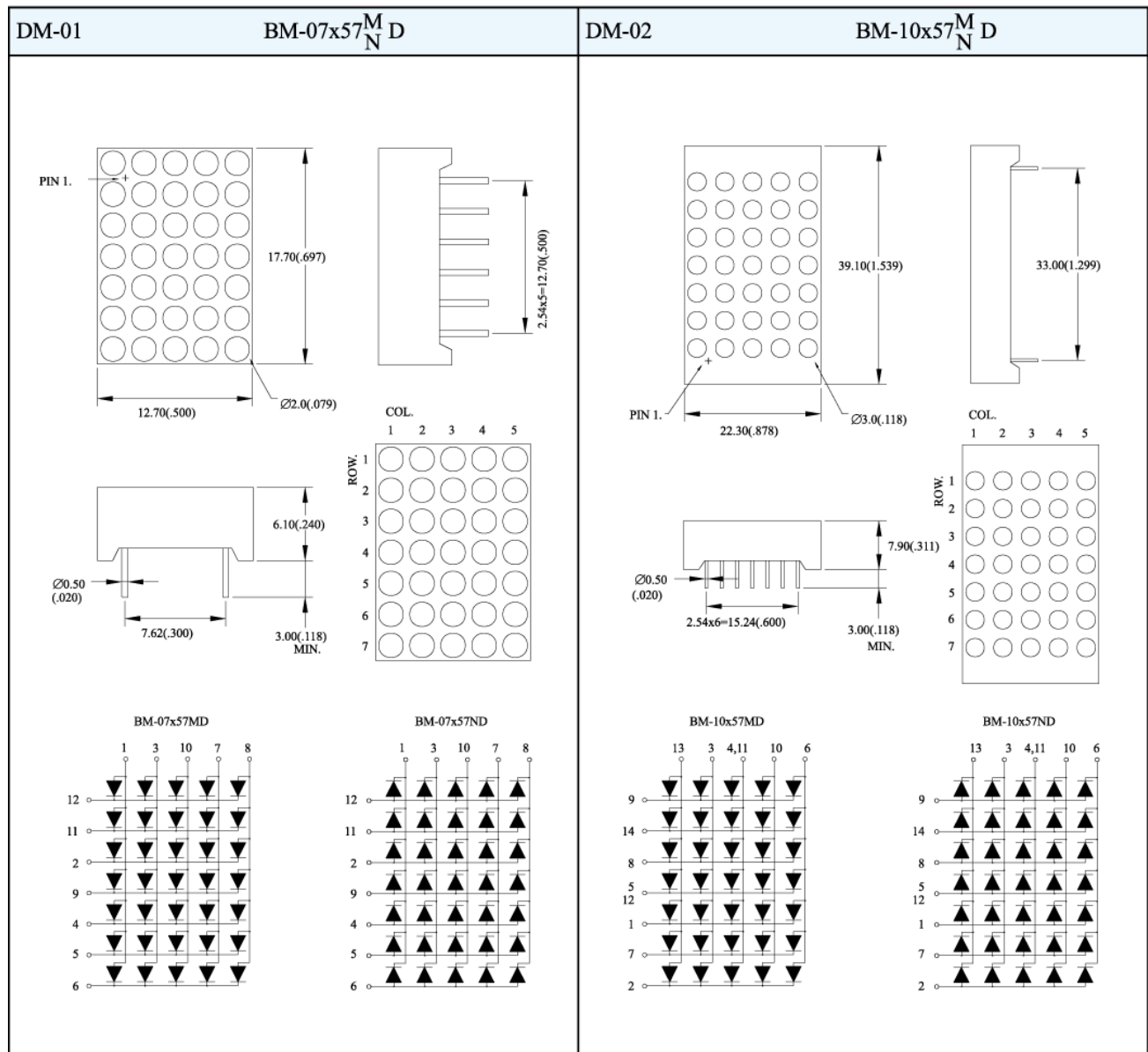




# LED Dot Matrix Display BM Series

Single Color, 5 x 7 Dot Matrix Displays

| Digit Size            | Part No.            |                       | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|-----------------------|---------------------|-----------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                       | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                       |                     |                       |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 0.70" High $\phi$ 2.0 | BM-07257MD          | BM-07257ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 8.0                     | DM-01       |
|                       | BM-07457MD          | BM-07457ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 8.0                     |             |
|                       | BM-07657MD          | BM-07657ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 12.0                    |             |
|                       | BM-07J57MD          | BM-07J57ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 28.0                    |             |
|                       | BM-07K57MD          | BM-07K57ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 30.0                    |             |
| 1.20" High $\phi$ 3.0 | BM-10257MD          | BM-10257ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 8.0                     | DM-02       |
|                       | BM-10457MD          | BM-10457ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 8.0                     |             |
|                       | BM-10657MD          | BM-10657ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 12.0                    |             |
|                       | BM-10J57MD          | BM-10J57ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 28.0                    |             |
|                       | BM-10K57MD          | BM-10K57ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 30.0                    |             |



NOTES: 1.All Dimensions are in millimeters(inches).

3.Specifications are subject to change without notice.

2.Tolerance is  $\pm 0.25\text{mm}(.010")$ .

4.NP:No Pin.

5.NC:No Connect.

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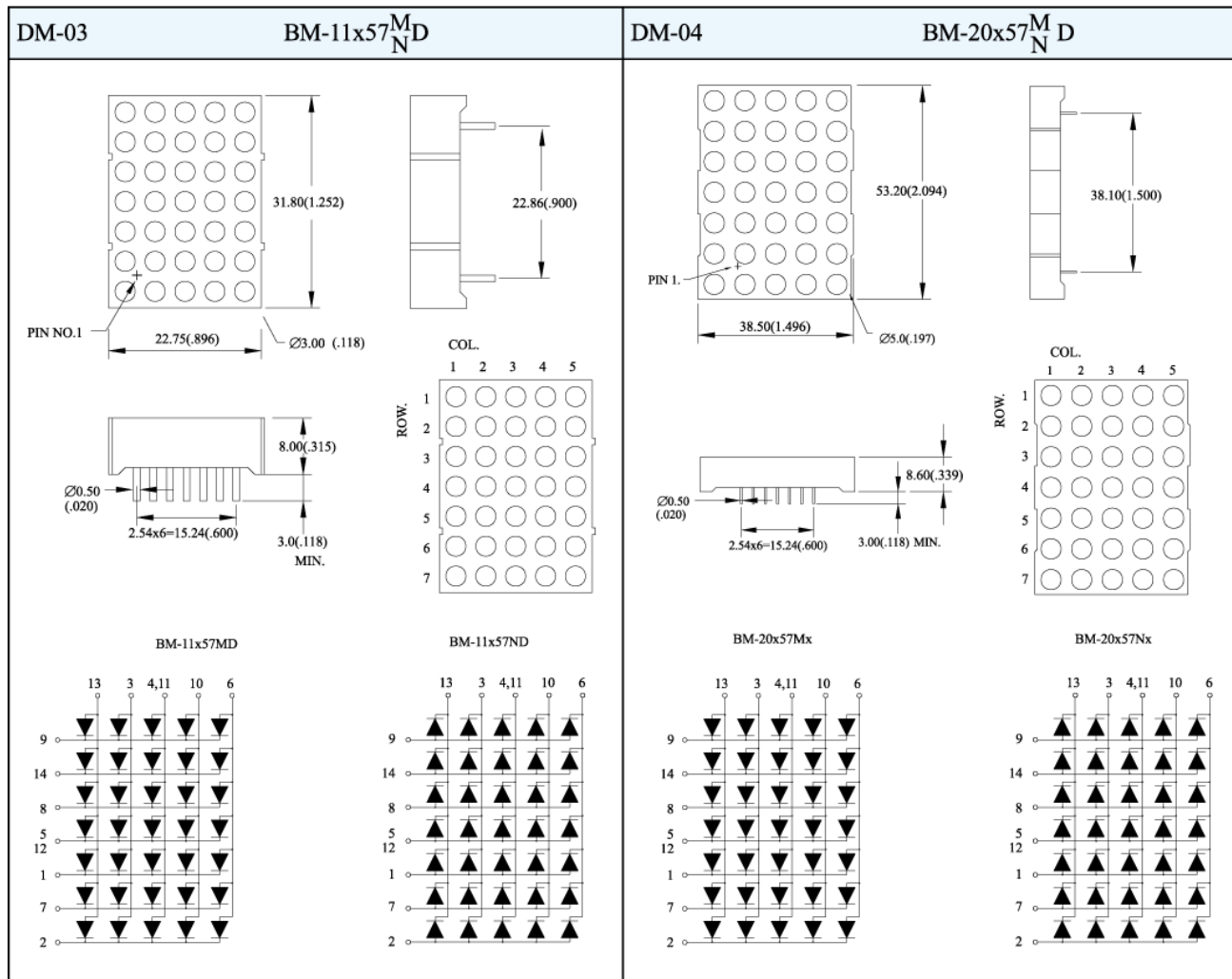
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# LED Dot Matrix Display BM Series

Single Color, 5 x 7 Dot Matrix Displays

| Digit Size            | Part No.            |                       | Chip                       |                                  | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|-----------------------|---------------------|-----------------------|----------------------------|----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                       | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda$ p(nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                       |                     |                       |                            |                                  |                          |         |         |          | Typ.                          | Max. |                         |             |
| 1.40" High $\phi$ 3.0 | BM-11257MD          | BM-11257ND            | GaP/ GaP/ Yellow Green     | 568                              | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 9.0                     | DM-03       |
|                       | BM-11457MD          | BM-11457ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                              | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 9.0                     |             |
|                       | BM-11457MA          | BM-11457NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                              | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 16.0                    |             |
|                       | BM-11657MD          | BM-11657ND            | GaAlAs/ SH/ Super Red      | 660                              | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 14.0                    |             |
|                       | BM-11657MA          | BM-11657NA            | GaAlAs/ SH/ Super Red      | 660                              | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 18.0                    |             |
|                       | BM-11F57MD          | BM-11F57ND            | GaAlAs/ DDH/ Super Red     | 660                              | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 20.0                    |             |
|                       | BM-11J57MD          | BM-11J57ND            | AlGaInP/GaAs/ Ultra Orange | 620                              | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 28.0                    |             |
|                       | BM-11K57MD          | BM-11K57ND            | AlGaInP/GaAs/ Ultra Yellow | 592                              | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 30.0                    |             |
| 2.00" High $\phi$ 5.0 | BM-20257MD          | BM-20257ND            | GaP/ GaP/ Yellow Green     | 568                              | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 12.0                    | DM-04       |
|                       | BM-20457MD          | BM-20457ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                              | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 12.0                    |             |
|                       | BM-20457MA          | BM-20457NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                              | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 20.0                    |             |
|                       | BM-20657MD          | BM-20657ND            | GaAlAs/ SH/ Super Red      | 660                              | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 16.0                    |             |
|                       | BM-20657MA          | BM-20657NA            | GaAlAs/ SH/ Super Red      | 660                              | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 24.0                    |             |
|                       | BM-20F57MD          | BM-20F57ND            | GaAlAs/ DDH/ Super Red     | 660                              | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 22.0                    |             |
|                       | BM-20J57MD          | BM-20J57ND            | AlGaInP/GaAs/ Ultra Orange | 620                              | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 30.0                    |             |
|                       | BM-20K57MD          | BM-20K57ND            | AlGaInP/GaAs/ Ultra Yellow | 592                              | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 32.0                    |             |



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4.NP:No Pin. 5.NC:No Connect.

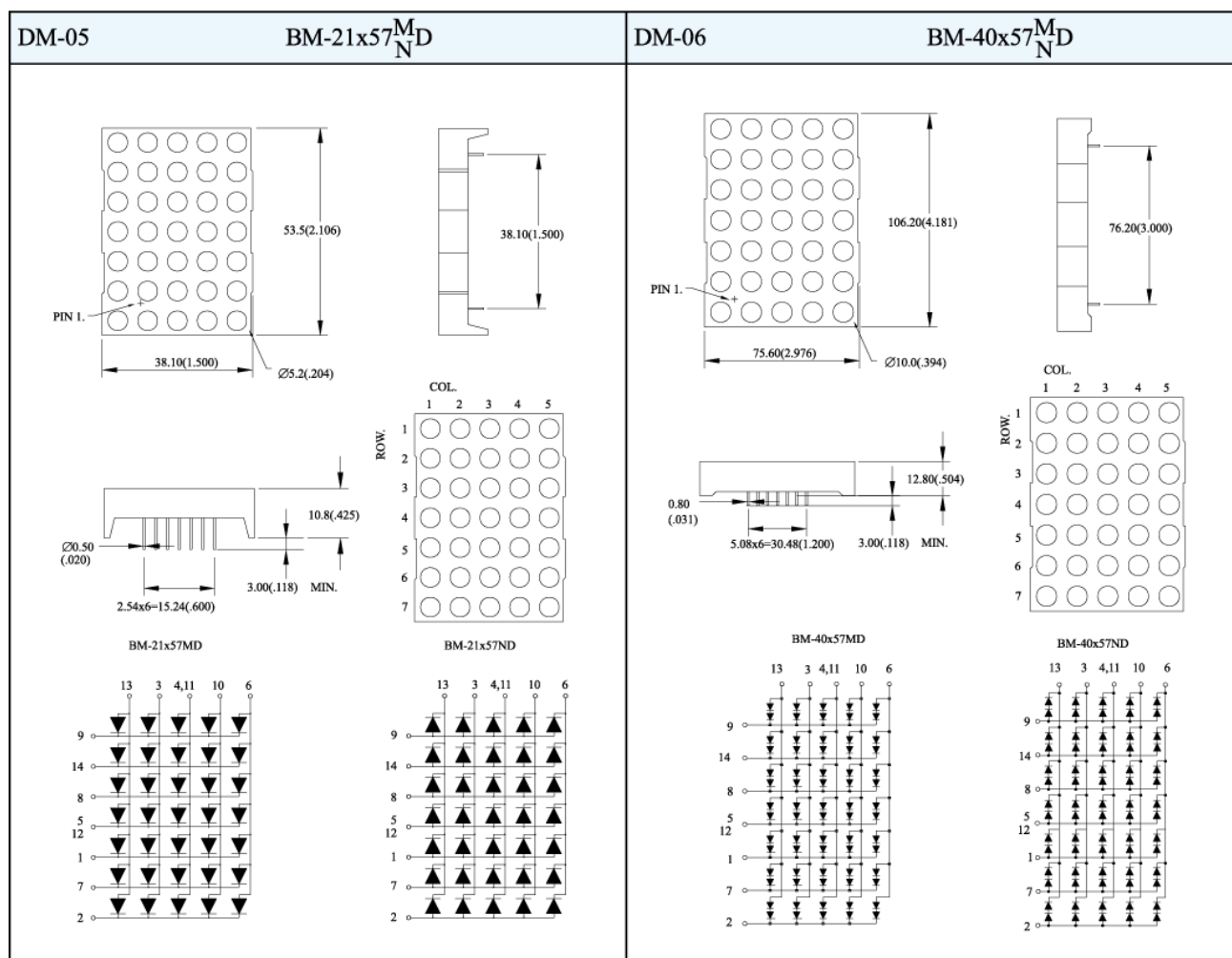
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# LED Dot Matrix Display BM Series

Single Color, 5 x 7 Dot Matrix Displays

| Digit Size             | Part No.            |                            | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|------------------------|---------------------|----------------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                        | Column Common Anode | Column Common Cathode      | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                        |                     |                            |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 2.00" High $\phi$ 5.0  | BM-21257MD          | BM-21257ND                 | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 12.0                    | DM-05       |
|                        | BM-21457MD          | BM-21457ND                 | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 12.0                    |             |
|                        | BM-21457MA          | BM-21457NA                 | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 20.0                    |             |
|                        | BM-21657MD          | BM-21657ND                 | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 16.0                    |             |
|                        | BM-21657MA          | BM-21657NA                 | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 24.0                    |             |
|                        | BM-21F57MD          | BM-21F57ND                 | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 22.0                    |             |
|                        | BM-21J57MD          | BM-21J57ND                 | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 30.0                    |             |
| BM-21K57MD             | BM-21K57ND          | AlGaInP/GaAs/ Ultra Yellow | 592                        | 15                                | 80                       | 30      | 150     | 2.1      | 2.5                           | 32.0 |                         |             |
| 4.00" High $\phi$ 10.0 | BM-40257MD          | BM-40257ND                 | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 160     | 30      | 150      | 4.2                           | 5.0  | 15.0                    | DM-06       |
|                        | BM-40457MD          | BM-40457ND                 | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 15.0                    |             |
|                        | BM-40457MA          | BM-40457NA                 | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 23.0                    |             |
|                        | BM-40657MD          | BM-40657ND                 | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 20.0                    |             |
|                        | BM-40657MA          | BM-40657NA                 | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 25.0                    |             |
|                        | BM-40F57MD          | BM-40F57ND                 | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 20.0                    |             |
|                        | BM-40J57MD          | BM-40J57ND                 | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 160     | 30      | 150      | 4.0                           | 5.0  | 32.0                    |             |
| BM-40K57MD             | BM-40K57ND          | AlGaInP/GaAs/ Ultra Yellow | 592                        | 15                                | 160                      | 30      | 150     | 4.2      | 5.0                           | 35.0 |                         |             |



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