



# Single Digit LED Displays BF-A/C, BF-U, BS-A/C Series

7-segment,  $\pm 1$  overflow

| Digit Size                   | Part No.               |                      | Chip                   |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|------------------------------|------------------------|----------------------|------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                              | Common Anode           | 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. |                         |             |
| 0.36" Overflow Single-Digit  | BF-A321RD              | BF-C321RD            | GaAsP/Red              | 655                               | 40                       | 80      | 40      | 200      | 1.7                           | 2.0  | 0.6                     | SD-13       |
|                              | BF-A325RD              | BF-C325RD            | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
|                              | BF-A325RE              | BF-C325RE            |                        |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BF-A322RD              | BF-C322RD            | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 3.0                     |             |
|                              | BF-A323RD              | BF-C323RD            | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.0                     |             |
|                              | BF-A324RD              | BF-C324RD            | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 3.0                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BF-A326RD              | BF-C326RD            | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 6.0                     |             |
| BF-A32DRD                    | BF-C32DRD              | GaAlAs/ DH Super Red | 660                    | 20                                | 80                       | 30      | 150     | 1.7      | 2.5                           | 7.0  |                         |             |
| 0.39" Single-Digit           | BS-A341RD              | BS-C341RD            | GaAsP/Red              | 655                               | 40                       | 80      | 40      | 200      | 1.7                           | 2.0  | 0.6                     | SD-14       |
|                              | BS-A345RD              | BS-C345RD            | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
|                              | BS-A345RE              | BS-C345RE            |                        |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A342RD              | BS-C342RD            | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 3.0                     |             |
|                              | BS-A343RD              | BS-C343RD            | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.0                     |             |
|                              | BS-A344RD              | BS-C344RD            | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 3.0                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A346RD              | BS-C346RD            | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 6.0                     |             |
|                              | BS-A34DRD              | BS-C34DRD            | GaAlAs/ DH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 7.0                     |             |
|                              | Alpha-Numeric Displays | BS-A341RD-A          | BS-C341RD-A            | GaAsP/Red                         | 655                      | 40      | 80      | 40       | 200                           | 1.7  | 2.0                     |             |
| BS-A345RD-A                  |                        | BS-C345RD-A          | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
| BS-A345RE-A                  |                        | BS-C345RE-A          |                        |                                   |                          |         |         |          |                               |      |                         |             |
| BS-A342RD-A                  |                        | BS-C342RD-A          | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 3.0                     |             |
| BS-A343RD-A                  |                        | BS-C343RD-A          | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.0                     |             |
| BS-A344RD-A                  |                        | BS-C344RD-A          | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 3.0                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
| BS-A346RD-A                  |                        | BS-C346RD-A          | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 6.0                     |             |
| BS-A34DRD-A                  | BS-C34DRD-A            | GaAlAs/ DH Super Red | 660                    | 20                                | 80                       | 30      | 150     | 1.7      | 2.5                           | 7.0  |                         |             |
| 0.39" Alpha-Numeric Displays | BS-A311RD-B            | BS-C311RD-B          | GaAsP/Red              | 655                               | 40                       | 80      | 40      | 200      | 1.7                           | 2.0  | 0.6                     | SD-16       |
|                              | BS-A315RD-B            | BS-C315RD-B          | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
|                              | BS-A315RE-B            | BS-C315RE-B          |                        |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A312RD-B            | BS-C312RD-B          | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 2.8                     |             |
|                              | BS-A313RD-B            | BS-C313RD-B          | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.2                     |             |
|                              | BS-A314RD-B            | BS-C314RD-B          | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 2.8                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A316RD-B            | BS-C316RD-B          | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 5.0                     |             |
| BS-A31DRD-B                  | BS-C31DRD-B            | GaAlAs/ DH Super Red | 660                    | 20                                | 80                       | 30      | 150     | 1.7      | 2.5                           | 10.0 |                         |             |
| 0.40" Single-Digit           | BS-A401RD              | BS-C401RD            | GaAsP/Red              | 655                               | 40                       | 80      | 40      | 200      | 1.7                           | 2.0  | 0.6                     | SD-17       |
|                              | BS-A405RD              | BS-C405RD            | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
|                              | BS-A405RE              | BS-C405RE            |                        |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A402RD              | BS-C402RD            | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 3.0                     |             |
|                              | BS-A403RD              | BS-C403RD            | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.0                     |             |
|                              | BS-A404RD              | BS-C404RD            | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 3.0                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BS-A406RD              | BS-C406RD            | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 6.0                     |             |
| BS-A40DRD                    | BS-C40DRD              | GaAlAs/ DH Super Red | 660                    | 20                                | 80                       | 30      | 150     | 1.7      | 2.5                           | 7.0  |                         |             |
| 0.40" Overflow Single-Digit  | BF-U401RD              |                      | GaAsP/Red              | 655                               | 40                       | 80      | 40      | 200      | 1.7                           | 2.0  | 0.6                     | SD-18       |
|                              | BF-U405RD              |                      | GaP/ Bright Red        | 700                               | 90                       | 40      | 15      | 50       | 2.2                           | 2.5  | 1.2                     |             |
|                              | BF-U405RE              |                      |                        |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BF-U402RD              |                      | GaP/ Green             | 568                               | 30                       | 80      | 30      | 150      | 2.2                           | 2.5  | 3.0                     |             |
|                              | BF-U403RD              |                      | GaAsP/GaP/ Yellow      | 585                               | 35                       | 80      | 30      | 150      | 2.1                           | 2.5  | 2.0                     |             |
|                              | BF-U404RD              |                      | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 3.0                     |             |
|                              |                        |                      | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |
|                              | BF-U406RD              |                      | GaAlAs/ SH Super Red   | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 6.0                     |             |
| BF-U40DRD                    |                        | GaAlAs/ DH Super Red | 660                    | 20                                | 80                       | 30      | 150     | 1.7      | 2.5                           | 7.0  |                         |             |



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7-segment,  $\pm 1$  overflow

|                                                                |                                                                |
|----------------------------------------------------------------|----------------------------------------------------------------|
| <p><b>SD-13</b> <b>BF-<math>\frac{A}{C}</math> 32xRD</b></p>   | <p><b>SD-14</b> <b>BS-<math>\frac{A}{C}</math> 34xRD</b></p>   |
| <p><b>SD-15</b> <b>BS-<math>\frac{A}{C}</math> 34xRD-A</b></p> | <p><b>SD-16</b> <b>BS-<math>\frac{A}{C}</math> 34xRD-B</b></p> |
| <p><b>SD-17</b> <b>BS-<math>\frac{A}{C}</math> 40xRD</b></p>   | <p><b>SD-18</b> <b>BF-U40xRD</b></p>                           |

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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