



# Single Digit LED Displays BS-A/C, BF-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. |                         |             |       |
| 1.50" Single-Digit          | BS-AB31RD          | BS-CB31RD             | GaAsP/Red              | 655                               | 40                       | 160     | 40      | 200      | 3.4                           | 4.0  | 2.5                     | SD-49       |       |
|                             | BS-AB35RD          | BS-CB35RD             | GaP/ Bright Red        | 700                               | 90                       | 80      | 15      | 50       | 4.4                           | 5.0  | 3.5                     |             |       |
|                             | BS-AB35RE          | BS-CB35RE             |                        |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB32RD          | BS-CB32RD             | GaP/ Green             | 568                               | 30                       | 160     | 30      | 150      | 4.4                           | 5.0  | 5.0                     |             |       |
|                             | BS-AB33RD          | BS-CB33RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 160     | 30      | 150      | 4.2                           | 5.0  | 4.0                     |             |       |
|                             | BS-AB34RD          | BS-CB34RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 5.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB36RD          | BS-CB36RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 10.0                    |             |       |
| BS-AB3FRD                   | BS-CB3FRD          | GaAlAs/ DDH Super Red | 660                    | 20                                | 160                      | 30      | 150     | 4.0      | 5.0                           | 15.0 |                         |             |       |
| 1.50" Overflow Single-Digit | BF-AB31RD          | BF-CB31RD             | GaAsP/Red              | 655                               | 40                       | 160     | 40      | 200      | 3.4                           | 4.0  | 2.5                     | SD-50       |       |
|                             | BF-AB35RD          | BF-CB35RD             | GaP/ Bright Red        | 700                               | 90                       | 80      | 15      | 50       | 4.4                           | 5.0  | 3.5                     |             |       |
|                             | BF-AB35RE          | BF-CB35RE             |                        |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BF-AB32RD          | BF-CB32RD             | GaP/ Green             | 568                               | 30                       | 160     | 30      | 150      | 4.4                           | 5.0  | 5.0                     |             |       |
|                             | BF-AB33RD          | FS-CB33RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 160     | 30      | 150      | 4.2                           | 5.0  | 4.0                     |             |       |
|                             | BF-AB34RD          | BF-CB34RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 5.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BF-AB36RD          | BF-CB36RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 10.0                    |             |       |
| BF-AB3FRD                   | BF-CB3FRD          | GaAlAs/ DDH Super Red | 660                    | 20                                | 160                      | 30      | 150     | 4.0      | 5.0                           | 15.0 |                         |             |       |
| 1.50" Single-Digit          | BS-AB41RD          | BS-CB41RD             | GaAsP/Red              | 655                               | 40                       | 160     | 40      | 200      | 3.4                           | 4.0  | 2.5                     | SD-51       |       |
|                             | BS-AB45RD          | BS-CB45RD             | GaP/ Bright Red        | 700                               | 90                       | 80      | 15      | 50       | 4.4                           | 5.0  | 3.5                     |             |       |
|                             | BS-AB45RE          | BS-CB45RE             |                        |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB42RD          | BS-CB42RD             | GaP/ Green             | 568                               | 30                       | 160     | 30      | 150      | 4.4                           | 5.0  | 5.0                     |             |       |
|                             | BS-AB43RD          | BS-CB43RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 160     | 30      | 150      | 4.2                           | 5.0  | 4.0                     |             |       |
|                             | BS-AB44RD          | BS-CB44RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 5.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB46RD          | BS-CB46RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 10.0                    |             |       |
|                             | BS-AB4FRD          | BS-CB4FRD             | GaAlAs/ DDH Super Red  | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 15.0                    |             |       |
|                             | 1.50" Single-Digit | BS-AB51RD             | BS-CB51RD              | GaAsP/Red                         | 655                      | 40      | 160     | 40       | 200                           | 3.4  | 4.0                     | 2.5         | SD-52 |
|                             |                    | BS-AB55RD             | BS-CB55RD              | GaP/ Bright Red                   | 700                      | 90      | 80      | 15       | 50                            | 4.4  | 5.0                     | 3.5         |       |
|                             |                    | BS-AB55RE             | BS-CB55RE              |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             |                    | BS-AB52RD             | BS-CB52RD              | GaP/ Green                        | 568                      | 30      | 160     | 30       | 150                           | 4.4  | 5.0                     | 5.0         |       |
| BS-AB53RD                   |                    | BS-CB53RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 160     | 30      | 150      | 4.2                           | 5.0  | 4.0                     |             |       |
| BS-AB54RD                   |                    | BS-CB54RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 5.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
| BS-AB56RD                   |                    | BS-CB56RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 10.0                    |             |       |
| BS-AB5FRD                   | BS-CB5FRD          | GaAlAs/ DDH Super Red | 660                    | 20                                | 160                      | 30      | 150     | 4.0      | 5.0                           | 15.0 |                         |             |       |
| 1.80" Single-Digit          | BS-AB01RD          | BS-CB01RD             | GaAsP/Red              | 655                               | 40                       | 240     | 40      | 200      | 5.1                           | 6.0  | 4.5                     | SD-53       |       |
|                             | BS-AB05RD          | BS-CB05RD             | GaP/ Bright Red        | 700                               | 90                       | 120     | 15      | 50       | 6.6                           | 7.5  | 5.5                     |             |       |
|                             | BS-AB05RE          | BS-CB05RE             |                        |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB02RD          | BS-CB02RD             | GaP/ Green             | 568                               | 30                       | 240     | 30      | 150      | 6.6                           | 7.5  | 7.0                     |             |       |
|                             | BS-AB03RD          | BS-CB03RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 240     | 30      | 150      | 6.3                           | 7.5  | 6.0                     |             |       |
|                             | BS-AB04RD          | BS-CB04RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 240     | 30      | 150      | 6.0                           | 7.5  | 7.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BS-AB06RD          | BS-CB06RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 240     | 30      | 150      | 5.1                           | 7.5  | 12.0                    |             |       |
| BS-AB0FRD                   | BS-CB0FRD          | GaAlAs/ DDH Super Red | 660                    | 20                                | 240                      | 30      | 150     | 6.0      | 7.5                           | 17.0 |                         |             |       |
| 1.80" Overflow Single-Digit | BF-AB01RD          | BF-CB01RD             | GaAsP/Red              | 655                               | 40                       | 240     | 40      | 200      | 5.1                           | 6.0  | 4.5                     | SD-54       |       |
|                             | BF-AB05RD          | BF-CB05RD             | GaP/ Bright Red        | 700                               | 90                       | 120     | 15      | 50       | 6.6                           | 7.5  | 5.5                     |             |       |
|                             | BF-AB05RE          | BF-CB05RE             |                        |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BF-AB02RD          | BF-CB02RD             | GaP/ Green             | 568                               | 30                       | 240     | 30      | 150      | 6.6                           | 7.5  | 7.0                     |             |       |
|                             | BF-AB03RD          | BF-CB03RD             | GaAsP/GaP/ Yellow      | 585                               | 35                       | 240     | 30      | 150      | 6.3                           | 7.5  | 6.0                     |             |       |
|                             | BF-AB04RD          | BF-CB04RD             | GaAsP/GaP/ Hi-Eff.Red  | 635                               | 45                       | 240     | 30      | 150      | 6.0                           | 7.5  | 7.0                     |             |       |
|                             |                    |                       | GaAsP/GaP/ Orange      |                                   |                          |         |         |          |                               |      |                         |             |       |
|                             | BF-AB06RD          | BF-CB06RD             | GaAlAs/ SH Super Red   | 660                               | 20                       | 240     | 30      | 150      | 5.1                           | 7.5  | 12.0                    |             |       |
| BF-AB0FRD                   | BF-CB0FRD          | GaAlAs/ DDH Super Red | 660                    | 20                                | 240                      | 30      | 150     | 6.0      | 7.5                           | 17.0 |                         |             |       |



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7-segment,  $\pm 1$  overflow

|                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <p><b>SD-49</b> <b>BS-<math>\overset{A}{\underset{C}{B}}3 \times RD</math></b></p> | <p><b>SD-50</b> <b>BF-<math>\overset{A}{\underset{C}{B}}3 \times RD</math></b></p> |
| <p><b>SD-51</b> <b>BS-<math>\overset{A}{\underset{C}{B}}4 \times RD</math></b></p> | <p><b>SD-52</b> <b>BS-<math>\overset{A}{\underset{C}{B}}5 \times RD</math></b></p> |
| <p><b>SD-53</b> <b>BS-<math>\overset{A}{\underset{C}{B}}0 \times RD</math></b></p> | <p><b>SD-54</b> <b>BF-<math>\overset{A}{\underset{C}{B}}0 \times RD</math></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.

**AMERICAN BRIGHT**