



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

7-segment, ± 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 λ_p (nm)	$\Delta \lambda$ (nm)	Pd (mw)	If (mA)	Ifp (mA)	Vf (v)		Iv. Typ. Per.Seg. (mcd)	
									Typ.	Max.		
0.28" Single Digit	BS-A281ND	BS-C281ND	GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-01
	BS-A285ND	BS-C285ND	GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BS-A285NE	BS-C285NE										
	BS-A282ND	BS-C282ND	GaP/ Green	568	30	80	30	150	2.2	2.5	2.8	
	BS-A283ND	BS-C283ND	GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.2	
	BS-A284ND	BS-C284ND	GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	2.8	
			GaAsP/GaP/ Orange									
	BS-A286ND	BS-C286ND	GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	5.0	
	BS-A28DND	BS-C28DND	GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	6.0	
	BS-A281RD-A	BS-C281RD-A	GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-02
	BS-A285RD-A	BS-C285RD-A	GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BS-A285RE-A	BS-C285RE-A										
	BS-A282RD-A	BS-C282RD-A	GaP/ Green	568	30	80	30	150	2.2	2.5	2.8	
	BS-A283RD-A	BS-C283RD-A	GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.2	
	BS-A284RD-A	BS-C284RD-A	GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	2.8	
			GaAsP/GaP/ Orange									
	BS-A286RD-A	BS-C286RD-A	GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	5.0	
	BS-A28DRD-A	BS-C28DRD-A	GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	6.0	
	BS-A281RD-B	BS-C281RD-B	GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-03
	BS-A285RD-B	BS-C285RD-B	GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BS-A285RE-B	BS-C285RE-B										
	BS-A282RD-B	BS-C282RD-B	GaP/ Green	568	30	80	30	150	2.2	2.5	2.8	
	BS-A283RD-B	BS-C283RD-B	GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.2	
	BS-A284RD-B	BS-C284RD-B	GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	2.8	
			GaAsP/GaP/ Orange									
	BS-A286RD-B	BS-C286RD-B	GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	5.0	
	BS-A28DRD-B	BS-C28DRD-B	GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	6.0	
0.3" Single-Digit	BS-A301RD	BS-C301RD	GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-04
	BS-A305RD	BS-C305RD	GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BS-A305RE	BS-C305RE										
	BS-A302RD	BS-C302RD	GaP/ Green	568	30	80	30	150	2.2	2.5	3.0	
	BS-A303RD	BS-C303RD	GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.0	
	BS-A304RD	BS-C304RD	GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	3.0	
			GaAsP/GaP/ Orange									
	BS-A306RD	BS-C306RD	GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	6.0	
	BS-A30DRD	BS-C30DRD	GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	7.0	
	BS-A301RD-A	BS-C301RD-A	GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-05
	BS-A305RD-A	BS-C305RD-A	GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BS-A305RE-A	BS-C305RE-A										
	BS-A302RD-A	BS-C302RD-A	GaP/ Green	568	30	80	30	150	2.2	2.5	3.0	
	BS-A303RD-A	BS-C303RD-A	GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.0	
	BS-A304RD-A	BS-C304RD-A	GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	3.0	
GaAsP/GaP/ Orange												
BS-A306RD-A	BS-C306RD-A	GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	6.0		
BS-A30DRD-A	BS-C30DRD-A	GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	7.0		
0.3" Overflow Single-Digit	BF-U301RD		GaAsP/Red	655	40	80	40	200	1.7	2.0	0.6	SD-06
	BF-U305RD		GaP/ Bright Red	700	90	40	15	50	2.2	2.5	1.2	
	BF-U305RE											
	BF-U302RD		GaP/ Green	568	30	80	30	150	2.2	2.5	3.0	
	BF-U303RD		GaAsP/GaP/ Yellow	585	35	80	30	150	2.1	2.5	2.0	
	BF-U304RD		GaAsP/GaP/ Hi-Eff.Red	635	45	80	30	150	2.0	2.5	3.0	
			GaAsP/GaP/ Orange									
	BF-U306RD		GaAlAs/ SH Super Red	660	20	80	30	150	1.7	2.5	6.0	
BF-U30DRD		GaAlAs/ DH Super Red	660	20	80	30	150	1.7	2.5	7.0		



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7-segment, ± 1 overflow

SD-01 BS-A_C28xND Top view dimensions: 4.00(.157) (pin to pin), 8.20(.323) (pin to pin), 7.10(.280) (pin to pin), 9.90(.390) (height), 8.20(.323) (pin to pin), 4.00(.157) (pin to pin), 8.20(.323) (pin to pin), 7.10(.280) (pin to pin). Side view dimensions: 9.90(.390) (height), 2.54(.100) (pin to pin), 0.50(.020) (pin to pin), 6.00(.236) (height), 3.00(.118)MIN. (height), 5.40(.212) (height), 0.25(.010) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 8, 7, 6, 5, 4, 3, 2, 1.	SD-02 BS-A_C28xRD-A Top view dimensions: 4.00(.157) (pin to pin), 8.20(.323) (pin to pin), 7.10(.280) (pin to pin), 9.90(.390) (height), 8.20(.323) (pin to pin), 4.00(.157) (pin to pin), 8.20(.323) (pin to pin), 7.10(.280) (pin to pin). Side view dimensions: 9.90(.390) (height), 2.54(.10)x3 (pin to pin), 0.30(.012) (pin to pin), 6.10(.240) (height), 3.00(.118)MIN. (height), 1.27(.05)x4-5.08(.20) (height), 0.50(.012) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 7, 6, 4, 2, 1, 10, 9, 5.
SD-03 BS-A_C28xRD-B Top view dimensions: 4.85(.191) (pin to pin), 7.40(.291) (pin to pin), 7.00(.276) (pin to pin), 10.00(.394) (height), 7.40(.291) (pin to pin), 4.85(.191) (pin to pin), 7.40(.291) (pin to pin), 7.00(.276) (pin to pin). Side view dimensions: 10.00(.394) (height), 2.54(.100) (pin to pin), 0.30(.012) (pin to pin), 6.10(.240) (height), 3.5 ± 0.5(.1383.5 ± 0.2)MIN. (height), 5.08(.20) (height), 0.50(.0196) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 7, 6, 4, 2, 1, 10, 9, 5.	SD-04 BS-A_C30xRD Top view dimensions: 5.20(.205) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin), 19.00(.748) (height), 10.10(.394) (pin to pin), 5.20(.205) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin). Side view dimensions: 19.00(.748) (height), 2.54(.100) (pin to pin), 0.5(.020) (pin to pin), 6.10(.240) (height), 3.00(.118)MIN. (height), 7.62(.300) (height), 0.50(.0196) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 6, 1, 13, 10, 8, 7, 2, 11, 9.
SD-05 BS-A_C30xRD-A Top view dimensions: 5.10(.201) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin), 19.00(.748) (height), 10.10(.394) (pin to pin), 5.10(.201) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin). Side view dimensions: 19.00(.748) (height), 2.54(.100) (pin to pin), 0.50(.020) (pin to pin), 6.10(.240) (height), 3.00(.118)MIN. (height), 7.62(.300) (height), 0.50(.0196) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 6, 1, 13, 10, 8, 7, 2, 11, 9.	SD-06 BF-U30xRD Top view dimensions: 5.10(.201) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin), 19.00(.748) (height), 10.10(.394) (pin to pin), 5.10(.201) (pin to pin), 10.10(.394) (pin to pin), 7.62(.300) (pin to pin). Side view dimensions: 19.00(.748) (height), 2.54(.100) (pin to pin), 0.50(.020) (pin to pin), 6.10(.240) (height), 3.00(.118)MIN. (height), 7.62(.300) (height), 0.50(.0196) (height). Pinout diagram: A, B, C, D, E, F, G, DP. Pin numbers: 13, 14, 7, 1, 6, 8, 12, 11, 4, 3, 5, 10.

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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