

BT - TN 2 16 08 A V K/SS - N S TF - 06 - LED 04									
BATRON TECHNOLOGY Blank: STN Supertwist TN: Twisted Nematic		Optional						ILLUMINATION LED Standard Lamp Styles Style 01: Left and right Style 02: Upper edge Style 03: Upper/lower edge Style 04: Over whole lit area More information on page 80.	
NUMBER OF LINES								ILLUMINATION LED: LED Backlight GR: Green-yellow (Standard) YE: Yellow (Min. quantity 500 pieces) RE: Red (Min. quantity 500 pieces) Different colors on request EL: Electroluminescent Lamps CFL: Cold Fluorescent Lamps More information on page 81.	
NUMBER OF CHARACTERS / LINE								VIEWING DIRECTION 06 or Blank: 6 o'clock 12: 12 o'clock More information on page 15.	
FONT CHARACTER Character LCD Modules 03: 3 mm Character Height 05: 5 mm Character Height 08: 8 mm Character Height 09: 9 mm Character Height 12: 12 mm Character Height								DISPLAY MODE RE: Reflective TF: Transflective Backlight-Version MP: Transmissive positive Background color depends on installed LED or EL MN: Transmissive negative Activated dots transparent - color depends on installed *LED or EL More information on page 13.	
GRAPHIC LCD MODULES Display Format: Dot Matrix (Commons x Row)								TEMPERATURE RANGE S: Standard S-Type is available only in STN technology E: Extended Industrial Type is available only in STN technology W: Wide W-Type is available only in standard TN technology More information on page 13.	
SINGLE VOLTAGE BOARD Blank: Without Power Supply Circuit A: With integrated Negative Power Supply									
INTERNAL CODE (V - Type / R - Type) K = OKI Driver SS = Samsung Controller B = Variante B									
DISPLAY COLOR N: Neutral Mode Color: Blue character on silver background Y or Blank: Yellow Mode Color: Dark blue character on yellow-green background F: Film B/W Color: Black character on silver background Please consult your local sales office for availability.									

Available Accessories for LCD Modules

- LED BACKLIGHT
 - ELECTROLUMINESCENT LAMPS
 - ANTIGLARE SURFACE PROTECTIVE LAYER
 - BEZELS FOR FRONT PANEL DESIGN
 - FLAT CABLE WITH INTEGRATED CONNECTOR
 - PIN HEADER - STRAIGHT AND 90° ANGLE
- Please see special chapter.

Character Display Modules

Model Number	Lines x Characters	Outline Dimensions W x H x D [mm] [□]		Effective Viewing Area W x H [mm] [□]	Character Size (W x H mm) [┘]	Duty Ratio	LED Style
		Without LED-Backlight	With LED-Backlight				
BT 21603	2 x 16	53 x 20 x 8 ■	53 x 20 x 8 ■	36 x 10	1.85 x 2.75	1/16	01
BT 22003	2 x 20	65 x 20 x 8 ■	65 x 20 x 8 ■	46 x 10	1.85 x 2.75	1/16	01
BT 24003	2 x 40	108 x 20 x 8 ■	108 x 20 x 8 ■	89 x 10	1.85 x 2.75	1/16	01
BT 42003	4 x 20	65 x 28.4 x 8 ■	65 x 28.4 x 8 ■	46 x 18.4	1.85 x 2.75	1 / 32	01
BT 21604	2 x 16	65 x 21.5 x 8 ■	65 x 21.5 x 8 ■	48.6 x 12	2.54 x 4.07	1/16	01
BT 11605	1 x 16	80 x 36 x 10	80 x 36 x 13	64.5 x 13.8	3.15 x 5.5	1 / 11	01
BT 21605	2 x 16	84 x 44 x 10	84 x 44 x 13	61 x 15.8	2.96 x 4.86	1/16	01
BT 22005	2 x 20	116 x 37 x 10	116 x 37 x 13	83 x 18.6	3.2 x 4.85	1/16	04
BT 22405	2 x 24	118 x 36 x 11	118 x 36 x 14	93.5 x 15.8	3.2 x 4.5	1/16	04
BT 24005	2 x 40	182 x 33.5 x 10	182 x 33.5 x 14	154.4 x 15.8	3.15 x 4.85	1/16	04
BT 41605	4 x 16	87 x 60 x 10	87 x 60 x 14	61.8 x 25.2	2.95 x 4.15	1/16	04
BT 42005	4 x 20	98 x 60 x 11	98 x 60 x 13	76 x 25.2	2.95 x 4.10	1/16	04
BT 44005	4 x 40	196 x 56 x 11	196 x 56 x 14	154.4 x 27.6	3.15 x 4.8	1/16	04
BT 11608	1 x 16	122 x 33 x 11	122 x 33 x 14	99 x 13	4.84 x 8.06	1 / 8	04
BT 12008	1 x 20	146 x 33 x 11	146 x 33 x 14	123 x 13	4.84 x 8.06	1 / 8	04
BT 21608	2 x 16	122 x 43 x 11	122 x 43 x 14	99 x 23	4.84 x 8.06	1/16	04
BT 22008	2 x 20	146 x 43 x 10	146 x 43 x 14	123 x 23	4.84 x 8.06	1/16	04
BT 24008	2 x 40	268 x 40.2 x 11	268 x 40.2 x 11	240.5 x 23	4.84 x 8.06	1/16	03
BT 42008(CFL)	4 x 20	-----	CFL Backlight	123.0 x 42.5	4.84 x 8.06	1/16	
BT 42008	4 x 20	146 x 62.5 x 11	146 x 62.5 x 13.5	123 x 42.5	4.84 x 8.06	1/16	04
BT 44008	4 x 40	288.2 x 77.5 x 13	288.2 x 77.5 x 13	253.7 x 56.6	5.00 x 8.5	1/16	03
BT 10809	1 x 8	84 x 44 x 11	84 x 44 x 14	61 x 15.8	6.45 x 9.4	1 / 8	04
BT 12009	1 x 20	182 x 35.5 x 10	182 x 35.5 x 14	154 x 15.3	6.7 x 9.4	1 / 8	04
BT 11612	1 x 16	154.4 x 43.5 x 11	154.4 x 43.5 x 14	136.4 x 18.7	5.9 x 11.1	1/16	02
BT 12012	1 x 20	182 x 43.5 x 11	182 x 43.5 x 13	147 x 18.7	5.9 x 11.1	1 / 8	02
BT 22012	2 x 20	182 x 60 x 11	182 x 60 x 14	147 x 32.5	5.9 x 11.1	1/16	03
BT 42012	4 x 20	182 x 90 x 11	182 x 90 x 14	147 x 65.4	5.9 x 11.1	1/16	03

Notes:

■ Types with integrated Connector: 9 mm Depth

□ 1 inch = 25,4 mm

Supply Voltage Circuits Types		Controller Type (Number of Pieces)	Driver Type (Number of Pieces)	Suitable Bezel (Plastic)		Connectors	Page	Model Number
				STN-Technology				
Standard	Extended			Bezel	Acrylglass			
Single	Dual	HD 44780 or NJU 6408(1)	HD 44100 or MSM 5839C	-----	-----	BT 21 000	15	BT 21603
Single	Dual	HD 44780 or NJU 6408(1)	NJU 6417 (1)	-----	-----	BT 21 000	16	BT 22003
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	-----	-----	BT 21 000	17	BT 24003
Single ⁴	Single ⁴	HD 66712 (1)	KS 0065 B (1)	-----	-----	BT 21 000	18	BT 42003
Single	Dual	HD 44780 (1)	HD 44100 (1)	-----	-----	BT 21 000	19	BT 21604
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12001	ZP LC 12001	SL-1-16-00/90	19	BT 11605
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12010	ZP LC 122	SL-1-16-00/90	20	BT 21605
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12007	ZP LC 027	SL-2-14-00/90	21	BT 22005
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	-----	-----	SL-2-14-00/90	22	BT 22405
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12004	ZP LC 024	SL-2-14-00/90	23	BT 24005
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12008	ZP LC 128	SL-1-16-00/90	24	BT 41605
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12009	ZP LC 029	SL-1-14-00/90	25	BT 42005
Single	Dual	HD 44780 (2) ●	HD 44100 or MSM 5839C	-----	-----	SL-1-16-00/90 SL-2-16-00/90	26	BT 44005
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12001	ZP BT 021	SL-1-14-00/90	27	BT 11608
Dual*	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12003	ZP BT 023	SL-1-14-00/90	28	BT 12008
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12002	ZP BT 022	SL-1-14-00/90	29	BT 21608
Dual*	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12004	ZP BT 024	SL-1-14-00/90	30	BT 22008
Single ¹	Single ¹	HD 44780 (1) ●	HD 44100 or MSM 5839C	-----	-----	SL-2-18-00/90	31	BT 24008
Dual*(Single ¹)	-----	HD 44780 (1) ●	HD 44100 or MSM 5839 C	BT 12005	ZP BT 025	SL-1-14-00/90	32	BT 42008(CFL)
Dual*(Single ¹)	Dual*(Single ¹)	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12005	ZP BT 025	SL-1-14-00/90	33	BT 42008
Single ²	Single ²	HD 44780 (2) ●	HD 44100 or MSM 5839C	-----	-----	SL-2-13-00/90	34	BT 44008 AV
Single	Dual	HD 44780 (1) ●	-----	BT 12010	ZP BT 030	SL-1-14-00/90	35	BT 10809
Single	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	LC 12004	ZP LC 024	SL-2-14-00/90	36	BT 12009
Dual*	Dual	HD 44780 (1) ●	-----	-----	-----	SL-2-14-00/90	37	BT 11612
Dual*	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12006	ZP BT 026	SL-2-14-00/90	38	BT 12012
Dual*	Dual	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12007	ZP BT 027	SL-2-14-00/90	39	BT 22012
Dual*(Single ²)	Dual*(Single ²)i	HD 44780 (1) ●	HD 44100 or MSM 5839C	BT 12008	ZP BT 028	SL-1-16-00/90 SL-2-14-00/90	40	BT 42012

Notes: * Single voltage types available upon request 1) SCI 7661 Converter for negative voltage on PCB 2) SCI 7660 Converter for negative voltage on PCB
 ● oder KS0070 3) RC 4391 Converter for negative voltage on PCB 4) Converter for negative voltage included

■ Graphic Display Modules

Model Number	Dot Pixels W x H	Outline Dimensions W x H x D [□]		Effective Viewing Area W x H [mm] [□]	Character Size (W x H mm) [□]	Duty Ratio	LED Style
		Without LED-Backlight	With LED-Backlight				
BT 100032	100 x 32	65 x 28.4 x 8 ■	65 x 28.4 x 8 ■	46 x 18.4	Dot Size 0.38 x 0.43	1/32	01
BT 80016	80 x 16	84 x 44 x 10	84 x 44 x 13	61.0 x 15.8	Dot Size 0.75 x 0.75	1/16	04
BT 84320	84 x 32	132 x 60 x 11	-----	76.3 x 33	Dot Size 0.75 x 0.75	1/16	---
BT 96016	96 x 16	122 x 43 x 11	122 x 43 x 14	99 x 23	Dot Size 0.92 x 1.10	1/16	04
BT 120032	120 x 32	146 x 62.5 x 11	146 x 62.5 x 14.5	118.74 x 38.34	Dot Size 0.93 x 1.14	1/32	04
BT 128064	128 x 64	200 x 100 x 26	200 x 100 x 26	136.89 x 68.41	Dot Size 1.0 x 1.0	1/64	04
BT 128064B	128 x 64	75 x 52.7 x 7.9	75 x 52.7 x 10	60 x 32.5	Dot Size 0.40 x 0.40	1/64	04
BT 160140	160 x 140	122 x 125 x 11.5	-----	76 x 64	Dot Size 0.40 x 0.39	1/140	---
BT 200016	200 x 16	182 x 33.5 x 10	182 x 33.5 x 14	154.4 x 15.8	Dot Size 0.65 x 0.63	1/16	04
BT 240064	240 x 64	146 x 62.5 x 11	146 x 62.5 x 14.5	117.56 x 38.36	Dot Size 0.45 x 0.56	1/64	04

Notes:

■ Types with integrated Connector: 9 mm Depth

□ 1 inch = 25,4 mm

Supply Voltage Circuits Types			Controller Type (Number of Pieces)	Driver Type (Number of Pieces)	Suitable Bezel (Plastic)		Connectors	Page	Model Number
STN-Technology	TN-Technology	Wide			Bezel	Acrylglass			
Standard	Extended								
Dual	Dual	-----	SED 1520 (2)	Bitmap	----	----	BT 21 001	41	BT 100032
Single	Dual	-----	SED 1520 (2)	Bitmap	BT 12010	ZP BT 030	SL-1-18-00/90	42	BT 80016
Single	Single	-----	SED 1503 (4)	Bitmap	----	----	SL-2-14-00/90	43	BT 84320
Single	Dual	-----	SED 1520 (2)	Bitmap	BT 12002	ZP BT 022	SL-1-14-00/90	44	BT 96016
Single ¹	Single ¹	-----	SED 1330 (1) or SED 1335 (1)	SED 1180F (2) SED 1190F (1)	BT 12005	ZP BT 025	SL-1-14-00/90 (+3Pins)	45	BT 120032
Single ³	Single ³	-----	SED 1330 (1) or SED 1335 (1)	SED 1180F (2) SED 1190F (1)	----	----	SL-2-13-00/40	46	BT 128064
Single ¹	Single ¹	-----	KS 0108B (2)	KS 0107 (1)	----	----	SL-1-20-00/90	47	BT 128064B
Single ¹	-----	-----	SED 1335 (1)	HD 66204 (2) HD 66205 (2)	----	----	----	48	BT 160140
Single	Dual	-----	SED 1520 (2) SED 1521 (1)	Bitmap	LC 12004	ZP LC 024	SL-2-16-00/90	49	BT 200016
Single ¹	Single ¹	-----	SED 1330 (1) or SED 1335 (1)	HD 66204 (4) HD 66205 (1)	BT 12005	ZP BT 025	SL-1-14-00/90 (+3Pins)	50	BT 240064

Notes:

¹) SCI 7661 Converter for negative voltage on PCB

³) RC 4391 Converter for negative voltage on PCB