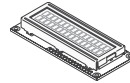


**Features:** • 8 and 16 bit digital interfaces • Available with or without controllers • Wide viewing angle • Wide operating temperature • Fast response time  
• High brightness LED backlights

Diagonal Size	Dimensions W x H x D (mm)	Interface	Luminance (cd/m <sup>2</sup> )	Contrast Ratio	Vertical Viewing Angle °	Horizontal Viewing Angle °	Digi-Key Part No.	Price Each
1.8	34.0 x 47.0 x 2.4	8/16 Bit	2800	250	35	45	NHD-1.8-128160YF-CTXI#-ND	15.61
2.4	42.72 x 60.26 x 3	16 Bit Digital	3200	250	35	45	NHD-2.4-240320YF-CTXI#-1-ND	25.41
2.4	42.72 x 60.26 x 3.8	16 Bit Digital	3200	250	35	45	NHD-2.4-240320YF-CTXI#-T-1-ND†	33.03
4.3	105.5 x 67.2 x 4.95	Digital	280	500	50	70	NHD-4.3-480272YF-ATXI#-T-ND†	58.01

† With Touch Panel

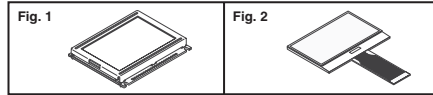
## LCD Character Modules



**Features:**  
• 5 x 8 character format • Different backlight color options • 8-bit or 4-bit interface • STN or FSTN, 12:00 or 6:00 viewing angle • 3V Power Supply

Dot Format	LCD Mode	Type	Module Size W x H (mm)	Viewing Area W x H (mm)	Character Size W x H (mm)	Operating Temperature °C	Digi-Key Part No.	Price Each
<b>Transflective</b>								
2 x 16	STN-Gray/YG	Serial	80.0 x 44.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216B3Z-FL-GBW-ND	16.66
2 x 16	STN-Gray/YG	Serial	80.0 x 36.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216K3Z-FL-GBW-ND	16.52
2 x 16	STN-Gray/YG	Serial	122.0 x 44.0	99.0 x 24.0	5.2 x 9.55	-20 - 70	NHD-0216S3Z-FL-GBW-ND	22.32
2 x 20	STN-Gray/YG	Serial	116.0 x 37.0	83.0 x 18.6	3.2 x 5.55	-20 - 70	NHD-0220D3Z-FL-GBW-ND	20.95
4 x 20	STN-Gray/YG	Serial	98.0 x 60.0	76.0 x 25.2	2.95 x 4.75	-20 - 70	NHD-0420D3Z-FL-GBW-ND	23.41
1 x 8	STN-Gray/White	Character	60.7 x 33.85	51.2 x 14.7	5.02 x 7.28	-20 - 70	NHD-0108H3Z-FSW-GBW-ND	6.17
2 x 8	STN-Gray/YG	Character	40.0 x 35.4	30.4 x 13.9	2.95 x 4.75	-20 - 70	NHD-0208AZ-FL-GBW-ND	6.93
2 x 8	STN-Gray/YG	Character	40.0 x 35.4	30.4 x 13.9	2.95 x 4.75	-20 - 70	NHD-0208AZ-FL-GBW-ND	6.90
2 x 8	STN-Gray/YG	Character	58.0 x 32.0	38.0 x 16.0	2.96 x 5.56	-20 - 70	NHD-0208BZ-FL-GBW-ND	7.15
2 x 8	STN-Gray/YG	Character	58.0 x 32.0	38.0 x 16.0	2.96 x 5.56	-20 - 70	NHD-0208BZ-FL-GBW-ND	7.08
2 x 12	STN-Gray/YG	Character	55.7 x 32.0	46.0 x 14.5	2.65 x 5.50	-20 - 70	NHD-0212WH-A-YGH-JT#-ND	6.90
2 x 16	STN-Gray/YG	Character	84.0 x 44.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216BZ-FL-YBW-ND	7.26
2 x 16	STN-Gray/YG	Character	80.0 x 36.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216K1Z-FL-YBW-ND	7.62
2 x 16	FSTN+/RGB	Character	80.0 x 36.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216K1Z-FS(RGB)-FBW-ND	10.53
2 x 16	STN-Gray/YG	Character	122.0 x 44.0	99.0 x 24.0	5.2 x 9.55	-20 - 70	NHD-0216S3Z-FL-YBW-ND	14.88
2 x 20	STN-Gray/YG	Character	116.0 x 37.0	83.0 x 18.6	3.2 x 5.55	-20 - 70	NHD-0220DZ-FL-YBW-ND	13.07
2 x 20	STN-Gray/White	Character	182.0 x 60.0	147.0 x 35.2	5.9 x 12.7	-20 - 70	NHD-0220JZ-FSW-GBW-ND	22.14
2 x 20	STN-Gray/White	Character	146.0 x 43.0	123.0 x 22.0	4.84 x 9.22	-20 - 70	NHD-0220WH-MTGH-JT#-ND	17.61
2 x 20	STN-Gray/YG	Character	146.0 x 43.0	123.0 x 22.0	4.84 x 9.22	-20 - 70	NHD-0220WH-MYGH-JT#-ND	17.42
4 x 20	STN-Gray/YG	Character	98.0 x 60.0	76.0 x 25.2	2.95 x 4.75	-20 - 70	NHD-0420DZ-FL-YBW-3V3-ND	15.94
4 x 20	STN-Gray/YG	Character	79.0 x 36.0	60.0 x 28.0	2.35 x 5.15	-20 - 70	NHD-0420H1Z-FL-GBW-3V3-ND	12.85
2 x 16	STN-Gray/No B/L	COG	49.7 x 25.3	45.7 x 14.3	2.21 x 4.68	-20 - 70	NHD-C0216AZ-FN-GBW-ND	6.61
2 x 16	STN-Gray/No B/L	COG	56.0 x 25.3	45.7 x 14.3	2.21 x 4.68	-20 - 70	NHD-C0216CU-FN-GBW-ND	6.54
2 x 20	FSTN+/White	COG	74.5 x 25.0	61.0 x 15.1	2.45 x 5.55	0 - 50	NHD-C0220AU-FSW-FTS-ND	7.44
2 x 20	FSTN+/White	COG	74.5 x 25.0	61.0 x 15.1	2.45 x 5.55	-20 - 70	NHD-C0220AZ-FSW-FTW-ND	7.41
<b>Transmissive</b>								
2 x 40	STN-Blue/White	Serial	210.0 x 22.0	153.5 x 16.0	3.2 x 5.55	-20 - 70	NHD-0240BZ-NSW-BTW-P-ND	23.41
2 x 16	FSTN+/RGB	Character	80.0 x 36.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216K1Z-NS(RGB)-FBW-ND	10.71
2 x 16	STN-Blue/White	Character	80.0 x 36.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216K1Z-NSW-BBW-L-ND	8.49
2 x 16	STN-Blue/White	Character	126.0 x 44.0	99.5 x 24.5	4.84 x 8.06	-20 - 70	NHD-0216S3Z-NSW-BBW-3V3-ND	15.72
2 x 16	STN-Blue/White	Character	126.0 x 44.0	99.5 x 24.5	4.84 x 8.06	-20 - 70	NHD-0216S3Z-NSW-BBW-ND	15.75
2 x 20	STN-Blue/White	Character	116.0 x 37.0	83.0 x 18.6	3.2 x 5.95	-20 - 70	NHD-0220DZ-NSW-BBW-ND	14.01
4 x 20	STN-Blue/White	Character	146.0 x 62.5	123 x 42.5	4.84 x 9.22	-20 - 70	NHD-0420E2Z-NSW-BBW-ND	20.47
<b>Reflective</b>								
1 x 8	STN-Gray/No B/L	Character	53.0 x 24.2	35.0 x 12.6	3.1 x 7.3	-20 - 70	NHD-0108BZ-RN-GBW-ND	5.48
2 x 8	STN-Gray/No B/L	Character	40.0 x 35.4	30.4 x 13.9	2.95 x 4.75	-20 - 70	NHD-0208AZ-RN-YBW-ND	5.99
2 x 8	STN-Gray/No B/L	Character	58.0 x 32.0	38.0 x 16.0	5.56 x 2.96	-20 - 70	NHD-0208BZ-RN-GBW-ND	6.06
2 x 8	STN-Gray/No B/L	Character	58.0 x 32.0	38.0 x 16.0	5.56 x 2.96	-20 - 70	NHD-0208BZ-RN-YBW-ND	6.03
2 x 16	STN-Gray/No B/L	Character	84.0 x 44.0	64.5 x 16.4	3.00 x 5.23	-20 - 70	NHD-0216BZ-RN-YBW-ND	6.35

## LCD Graphic Modules



**Features:**  
**Graphic:** • Bitmap graphics • LED or CCFL backlights • STN Blue, Gray or FSTN positive or negative • Built-in controllers • Touch panels available for QVGA's • 12:00 or 6:00 viewing angles **COG:** • Monochrome graphic format • Super low power consumption  
• LED backlight available

Fig.	Dot Format	LCD Mode	Type	Module Size W x H (mm)	Viewing Area W x H (mm)	Operating Temperature °C	Digi-Key Part No.	Price Each	
<b>Transflective</b>									
1	122 x 32	STN-YG/YG	Graphic	80.0 x 36.0	60.0 x 18.0	-20 - 70	NHD-12232WG-EYHH-V#A-ND	11.82	
	128 x 64	STN-Gray/White	Graphic	63.2 x 52.2	54 x 36	-20 - 70	NHD-12864MZ-FSW-GBW-L-ND	18.15	
	128 x 64	STN-Gray/White	Graphic	75.0 x 52.7	60.0 x 32.6	-20 - 70	NHD-12864WG-BTGH-T#N-ND	18.88	
	160 x 32	STN-YG/YG	Graphic	114 x 40	92 x 22	-20 - 70	NHD-16032AZ-FL-YBW-ND	14.34	
	160 x 32	STN-YG/YG	Graphic	122.0 x 44.0	99.0 x 24.0	-20 - 70	NHD-16032BZ-FL-YBW-ND	17.42	
	160 x 32	STN-Gray/White	Graphic	122.0 x 44.0	99.0 x 24.0	-20 - 70	NHD-16032BZ-FSW-GBW-ND	18.15	
	160 x 128	STN-Blue/White	Graphic	129.0 x 102.0	101.0 x 82.0	-20 - 70	NHD-160128WG-BTMI-VZ#-ND	51.36	
	240 x 64	FSTN+/White	Graphic	118.0 x 45.0	96.0 x 30.0	-20 - 70	NHD-24064CZ-FSW-FBW-ND	37.03	
	240 x 64	STN-Gray/White	Graphic	118.0 x 45.0	96.0 x 30.0	-20 - 70	NHD-24064CZ-FSW-GBW-ND	36.30	
	240 x 64	FSTN+/SuperBright White	Graphic	180.0 x 65.0	133.0 x 39.0	-20 - 70	NHD-24064WG-ASPH-VZ#-ND	60.54	
	240 x 64	FSTN+/White	Graphic	180.0 x 65.0	133.0 x 39.0	-20 - 70	NHD-24064WG-ATFH-VZ#000CB-ND	43.56	
	240 x 128	STN-Gray/YG	Graphic	144.0 x 104.0	114.0 x 64.0	-20 - 70	NHD-240128WG-BYGH-VZ#000C-ND	57.17	
320 x 240	FSTN+/SuperBright White	Graphic	165.8 x 109.0	122.0 x 92.0	-20 - 70	NHD-320240WG-BOSPH-VZ#-ND	70.13		
2	128 x 64	STN-YG/YG	COG	80.0 x 54.0	70.7 x 38.8	-20 - 70	NHD-C12864AZ-FSY-YBW-HT-ND	15.97	
	128 x 64	STN-Gray/White	COG	71.3 x 54.9	65.5 x 40.0	-20 - 70	NHD-C12864CZ-FSW-GBW-ND	11.98	
	128 x 64	FSTN+/White	COG	102.0 x 70.0	86.6 x 46.3	-20 - 70	NHD-C12864EZ-FSW-FTW-ND	18.15	
	128 x 64	FSTN+/White	COG	86.0 x 44.0	58.0 x 28.8	-20 - 70	NHD-C12864W-09-FSW-FBW-M-ND	11.54	
	128 x 65	STN-Gray/White	COG	59.3 x 42.0	52.6 x 27.0	-20 - 70	NHD-C12865AZ-FSW-GBW-ND	10.89	
	128 x 65	STN-Gray/White	COG	66.3 x 49.8	60.1 x 34.5	-20 - 70	NHD-C12865BZ-FSW-GBW-ND	13.07	
	128 x 128	STN-Gray/White	COG	71.3 x 75.4	65.5 x 60.5	-20 - 70	NHD-C128128BZ-FSW-GBW-ND	20.33	
	160 x 100	FSTN+/White	COG	49.2 x 45.0	47.0 x 33.39	-20 - 70	NHD-C160100DZ-FSW-FBW-ND	13.47	
	240 x 64	FSTN+/White	COG	142.5 x 51.7	130.2 x 37.6	-20 - 70	NHD-C24064W0-ATFH#-3V3-ND	25.05	
	<b>Transmissive</b>								
	1	122 x 32	STN-Blue/White	Graphic	83.53 x 27.5	60.5 x 18.5	-20 - 70	NHD-12232KZ-NSW-BBW-P-ND	11.98
		128 x 64	STN-Blue/White	Graphic	93.0 x 70.0	72.0 x 40.0	-20 - 70	NHD-12864AZ-NSW-BBW-TR-ND	20.15
128 x 64		STN-Blue/White	Graphic	75.0 x 52.7	60.0 x 32.6	-20 - 70	NHD-12864WG-BTMI-V#N-ND	18.51	
240 x 64		STN-Blue/White	Graphic	118.0 x 45.0	96.0 x 30.0	-20 - 70	NHD-24064CZ-NSW-GBW-ND	36.48	
240 x 64		STN-Blue/SuperBright White	Graphic	180.0 x 65.0	133.0 x 39.0	-20 - 70	NHD-24064WG-ASMI-VZ#-ND	40.95	
240 x 128		STN-Blue/White	Graphic	93.0 x 65.0	72.0 x 40.0	-20 - 70	NHD-240128BZ-NSW-BTW-ND	33.76	
240 x 128	STN-Blue/White	Graphic	144.0 x 104.0	114.0 x 64.0	-20 - 70	NHD-240128WG-BTMI-VZ#-ND	58.04		
320 x 240	STN-Blue/SuperBright White	Graphic	166.8 x 109.0	122.0 x 92.0	-20 - 70	NHD-320240WG-BOSMI-VZ#-ND	69.33		
<b>Reflective</b>									
2	128 x 64	FSTN+/No B/L	COG	48.0 x 36.0	44.0 x 24.0	-20 - 70	NHD-C12864B2Z-RN-FBW-ND	8.75	
	128 x 65	STN-Gray/No B/L	COG	57.0 x 39.4	52.6 x 27.0	-20 - 70	NHD-C12865AZ-RN-GBW-ND	6.90	
	160 x 100	STN-Gray/No B/L	COG	41.50 x 36.00	38.50 x 25.20	-10 - 60	NHD-C160100AZ-RN-GBW-ND	9.98	
	160 x 100	FSTN+/No B/L	COG	51.50 x 39.70	43.60 x 27.25	-20 - 70	NHD-C160100CZ-RN-FBW-ND	11.80	

**Free shipping on orders over £50! All prices are in British pound sterling and include duties.**

uk.digikey.com — FREEPHONE: 0-800-587-0991 • 0-800-904-7786 — FREEFAX: 0-800-587-0992 • 0-800-904-7783

(UK091) 2289

0