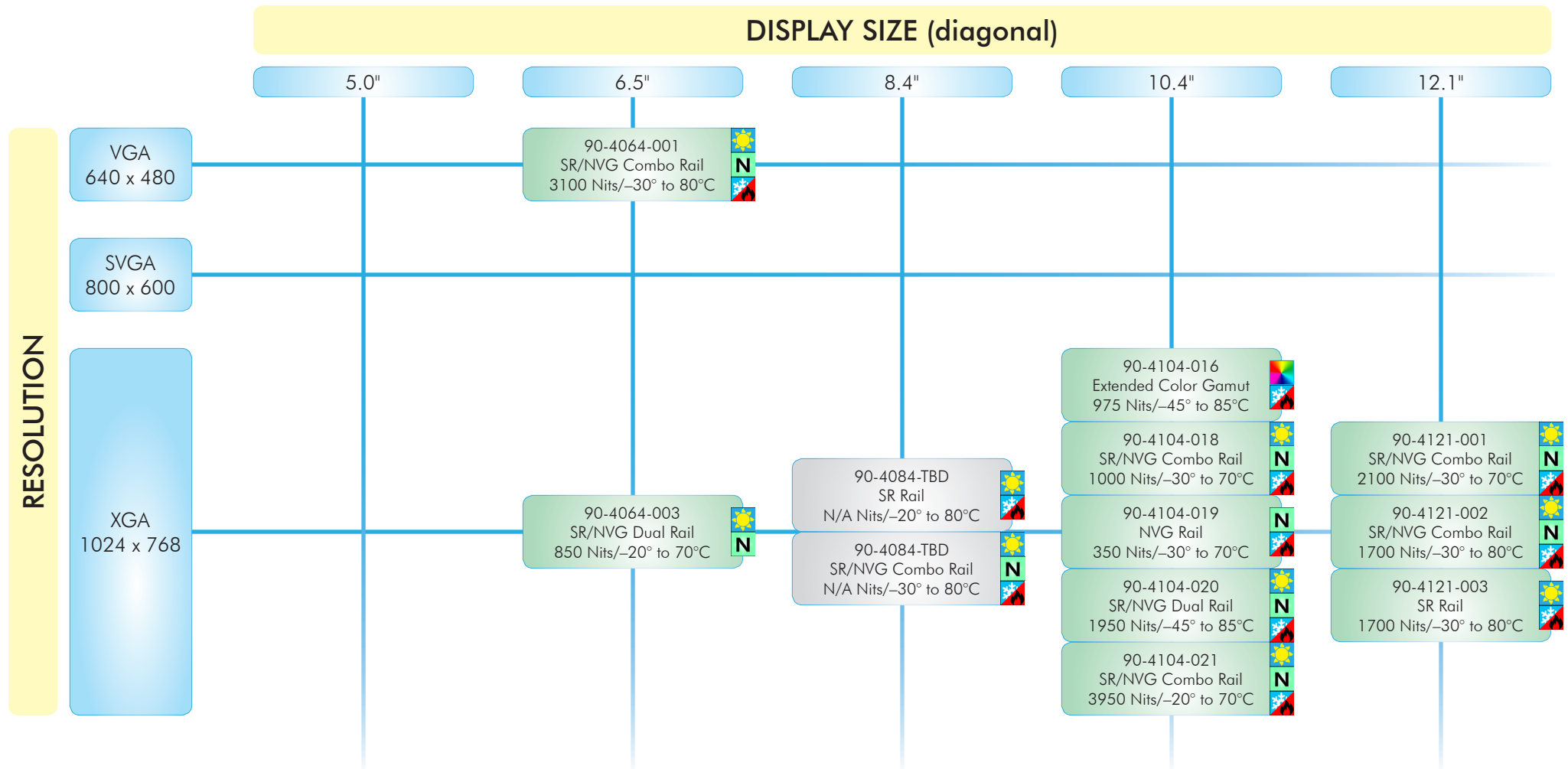


DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCDs 4:3 5.0" to 12.1"

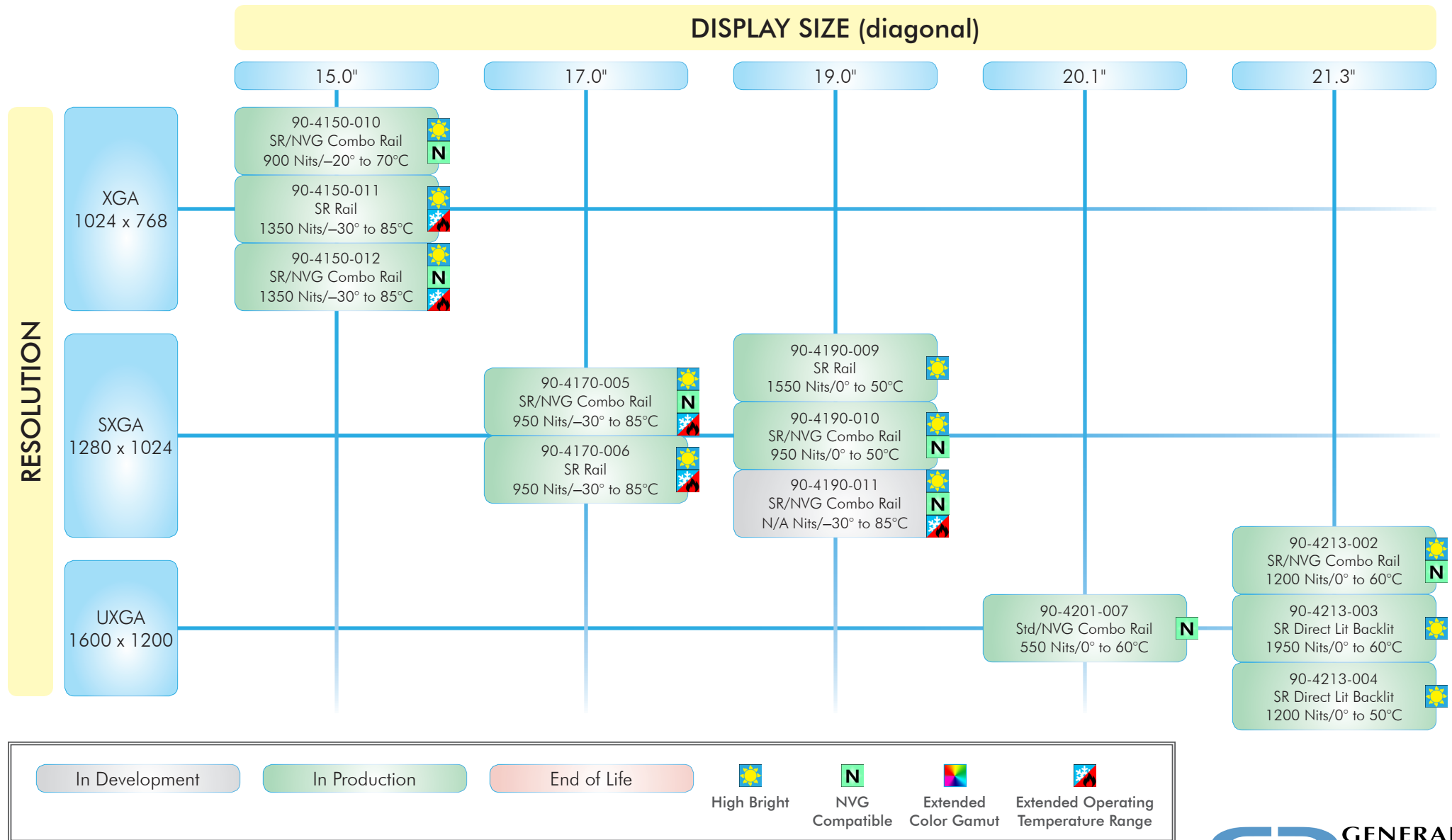


In Development
In Production
End of Life

High Bright
 NVG Compatible
 Extended Color Gamut
 Extended Operating Temperature Range

DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCDs **4:3/5:4** 15.0" to 21.3"



DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCDs **16:9/16:10** 15.6" to 24.0"

		DISPLAY SIZE (diagonal)				
		15.6"	17.3"	18.5"	21.5"	24.0"
RESOLUTION	FHD 1920 x 1080	90-4156-001 SR/NVG Combo Rail N/A Nits/-20° to 75°C [Sun] [N] [Temp]	90-4173-001 SR/NVG Combo Rail 950 Nits/0° to 70°C [Sun] [N]	90-4185-001 SR/NVG Combo Rail N/A Nits/N/A° to N/A°C [Sun] [N]	90-4215-003 SR/NVG Combo Rail 850 Nits/0° to 50°C [Sun] [N]	90-4240-002 SR/NVG Combo Rail 750 Nits/-20° to 70°C [Sun] [N]
	WQHD 2560 x 1440				90-4215-006 SR Direct Lit Backlight 1050 Nits/0° to 50°C [Sun]	90-4240-003 SR/NVG Combo Rail 900 Nits/0° to 50°C [Sun] [N]
	4K 4096 x 2160					

In Development	In Production	End of Life	[Sun] High Bright	[N] NVG Compatible	[Color] Extended Color Gamut	[Temp] Extended Operating Temperature Range
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DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCD Characteristics

SPECIFICATIONS

	6.5"		8.4"		10.4"		
Part Number	90-4064-001	90-4064-003	90-4084-TBD	90-4084-TBD	90-4104-016	90-4104-018	90-4104-019
Status	In Production	In Production	Under Development	Under Development	In Production	In Production	In Production
Resolution	640 x 480	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768
Brightness @ Rail Temp.	3100 nits @ 50°C	850 nits @ 50°C	N/A	N/A	975 nits @ 70°C	1000 nits @ 60°C	350 nits @ 50°C
Contrast Ratio	650:1	850:1	N/A	N/A	N/A	1100:1	N/A
Weber Class	6	5	N/A	N/A	N/A	5	N/A
Display Mode	SR/NVIS	SR/NVIS	SR	SR/NVIS	Extended Color Gamut	SR/NVIS	NVIS
Colors	6-bit/6-bit + FRC	6-bit/6-bit + FRC	6-bit/6-bit + Hi-FRC	6-bit/6-bit + Hi-FRC	6-bit/6-bit + FRC	6-bit/6-bit + FRC	6-bit/6-bit + FRC
Response Time	3/15 ms	6/19 ms	13/12 ms	4/12 ms	25 ms	14/11 ms	14/11 ms
Viewing Angle	±80° H/±80° V	±80° H/+80, -60° V	±88° H/±88° V	±80° H/+80, -60° V	±85° H/±85° V	±88° H/±88° V	±88° H/±85° V
NTSC	40%	36%	72%	40%	104%	55%	55%
Technology	TN	TN	α-Si TFT	α-Si TFT	ADS	Super MVA	Super MVA
Operating Temperature	-30°C to 80°C	-20°C to 70°C	-20°C to 80°C	-30°C to 80°C	-45°C to 85°C	-30°C to 70°C	-30°C to 70°C
Storage Temperature	-30°C to 80°C	-30°C to 80°C	-30°C to 80°C	-30°C to 80°C	-55°C to 85°C	-30°C to 80°C	-30°C to 80°C
Power	8 W	29 W	N/A	N/A	N/A	17 W	13 W

DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCD Characteristics

SPECIFICATIONS

	10.4"		12.1"		
Part Number	90-4104-020	90-4104-021	90-4121-001	90-4121-002	90-4121-003
Status	In Production	In Production	In Production	In Production	In Production
Resolution	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768
Brightness @ Rail Temp.	1950 nits @ 70°C	3950 nits @ 60°C	2100 Nits @ 50°C	1700 Nits @ 50°C	1700 Nits @ 50°C
Contrast Ratio	1250:1	850:1	950:1	850:1	850:1
Weber Class	6	6	5	5	5
Display Mode	SR/NVIS	SR/NVIS	SR	SR/NVIS	SR
Colors	6-bit/6-bit + FRC	6-bit/8-bit	6-bit/6-bit + FRC	6-bit/6-bit + FRC	6-bit/6-bit + FRC
Response Time	25 ms	16 ms	5/11 ms	5/11 ms	5/11 ms
Viewing Angle	±88° H/±85° V	±75° H/+60, -70° V	±80° H/±70° V	±80° H/±70° V	±80° H/±70° V
NTSC	70%	50%	63%	63%	63%
Technology	ADS	TN	α-Si TFT	α-Si TFT	α-Si TFT
Operating Temperature	-45°C to 85°C	-20°C to 70°C	-30°C to 70°C	-30°C to 80°C	-30°C to 80°C
Storage Temperature	-55°C to 85°C	-30°C to 80°C	-40°C to 80°C	-40°C to 85°C	-40°C to 85°C
Power	17 W	11 W	12 W	14 W	14 W

DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCD Characteristics

SPECIFICATIONS

	15.0"			15.6"	17.0"		17.3"
Part Number	90-4150-010	90-4150-011	90-4150-012	90-4156-001	90-4170-005	90-4170-006	90-4173-001
Status	In Production	In Production	In Production	In Development	In Production	In Production	In Production
Resolution	1024 x 768	1024 x 768	1024 x 768	1920 x 1080	1280 x 1024	1280 x 1024	1920 x 1080
Brightness @ Rail Temp.	900 nits @ 50°C	1350 nits @ 50°C	1350 nits @ 50°C	N/A	950 nits @ 50°C	950 nits @ 50°C	950 nits @ 55°C
Contrast Ratio	1150:1	1100:1	1100:1	N/A	800:1	800:1	900:1
Weber Class	5	4	4	N/A	5	5	5
Display Mode	SR/NVIS	SR	SR/NVIS	SR/NVIS	SR/NVIS	SR	SR/NVIS
Colors	6-bit/8-bit	6-bit/6-bit + FRC	6-bit/6-bit + FRC	8-bit	6-bit/6-bit + FRC	6-bit/8-bit	8-bit
Response Time	3/5 ms	5.7/2.3 ms	5.7/2.3 ms	35 ms	5.7/2.3 ms	5.7/2.3 ms	37/3 ms
Viewing Angle	±80° H/±80° V	±80° H/+60, -80° V	±80° H/+60, -80° V	±85° H/±85° V	±85° H/±80° V	±85° H/±80° V	±80° H/+60, -80° V
NTSC	60%	60%	60%	76%	60%	60%	78%
Technology	TN	TN	ADS	ASV	TN	TN	α-Si LCM
Operating Temperature	-20°C to 70°C	-30°C to 85°C	-30°C to 85°C	-20°C to 75°C	-30°C to 85°C	-30°C to 85°C	0°C to 70°C
Storage Temperature	-30°C to 80°C	-30°C to 85°C	-30°C to 85°C	-20°C to 80°C	-30°C to 85°C	-30°C to 85°C	-30°C to 75°C
Power	13 W	13 W	13 W	N/A	22 W	22 W	22 W

DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCD Characteristics

SPECIFICATIONS

	18.5"	19.0"			20.1"
Part Number	90-4185-001	90-4190-009	90-4190-010	90-4190-011	90-4201-007
Status	In Development	In Production	In Production	In Development	In Production
Resolution	1920 x 1080	1280 x 1024	1280 x 1024	1280 x 1024	1600 x 1200
Brightness @ Rail Temp.	N/A	1550 nits @ 50°C	950 nits @ 50°C	N/A	550 nits @ 50°C
Contrast Ratio	N/A	1000:1	N/A	N/A	1200:1
Weber Class	N/A	5	5	N/A	4
Display Mode	SR/NVIS	SR	SR/NVIS	SR/NVIS	STD/NVIS
Colors	N/A	6-bit + FRC	6-bit + FRC	8-bit	8-bit
Response Time	N/A	3.6/1.4 ms	3.6/1.4 ms	7/3 ms	30 ms
Viewing Angle	N/A	±85° H/±80° V	±85° H/±80° V	±85° H/±80° V	±85° H/±85° V
NTSC	N/A	72%	72%	90%	71%
Technology	N/A	TN	TN	TN	VA
Operating Temperature	N/A	0°C to 50°C	0°C to 50°C	-30°C to 85°C	0°C to 60°C
Storage Temperature	N/A	-20°C to 60°C	-20°C to 60°C	-30°C to 85°C	-25°C to 60°C
Power	N/A	22 W	17 W	N/A	23 W

DISPLAY PRODUCT LINE-UP

General Digital Enhanced LCD Characteristics

SPECIFICATIONS

	21.3"			21.5"		24.0"	
Part Number	90-4213-002	90-4213-003	90-4213-004	90-4215-003	90-4215-006	90-4240-002	90-4240-003
Status	In Production	In Production	In Production	In Production	In Production	In Production	In Production
Resolution	1600 x 1200	1600 x 1200	1600 x 1200	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
Brightness @ Rail Temp.	1200 nits @ 50°C	1950 nits @ 50°C	1200 nits @ 50°C	850 nits @ 50°C	1050 nits @ 50°C	750 nits @ 45°C	900 nits @ 50°C
Contrast Ratio	1300:1	1200:1	1300:1	3450:1	7450:1	4200:1	3350:1
Weber Class	5	6	6	5	6	6	2
Display Mode	SR/NVIS	SR	SR	SR/NVIS	SR	SR/NVIS	SR/NVIS
Colors	8-bit	8-bit	8-bit	8-bit	8-bit	8-bit	8-bit
Response Time	40 ms	40 ms	15/15 ms	20/5 ms	20/5 ms	16/9 ms	16/9 ms
Viewing Angle	±88° H/±88° V	±88° H/±88° V	±89° H/±89° V	±89° H/±89° V	±89° H/±89° V	±89° H/±89° V	±88° H/±88° V
NTSC	72%	72%	N/A	75%	75%	77%	72%
Technology	UA-SFT	UA-SFT	α-Si TFT	AMVA3	AMVA3	α-Si LCM	AMVA3
Operating Temperature	0°C to 60°C	0°C to 60°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	-20°C to 70°C	0°C to 50°C
Storage Temperature	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-30°C to 80°C	-20°C to 60°C
Power	63 W	80 W	25 W	29 W	29 W	28 W	32 W

DISPLAY PRODUCT LINE-UP

What is Weber Contrast?

Weber contrast is an important attribute to consider when selecting a display for use in high ambient brightness environments. Unlike the standard contrast value, which is measured in ideal conditions (dark room), the Weber contrast is measured under the simulated effects of direct sunlight (10,000 fc direct and 2,000 fL Lambertian light sources). General Digital determines and records the Weber contrast using the test procedure described in MIL-L-85762A. To simplify and quantify the engineering challenge of qualifying a panel for use in high ambient brightness conditions, we created our own unique metric (Weber Class), which is derived directly from Table II of MIL-L-85762A. This data establishes that the larger the Weber Class number, the better the display will perform in high ambient brightness conditions.

Weber Contrast Lookup Chart

Display Class	Contrast Range	Short Description	Ideal Applications
Class 1	0.00 to 1.49	Not sunlight readable	Not suitable for direct sunlight use
Class 2	1.50 to 1.99	Numeric ONLY	Useful for numerics only in direct sunlight
Class 3	2.00 to 2.99	Alphanumeric	Useful for characters and numerical data
Class 4	3.00 to 4.659	Graphic symbols and alphanumerics	Useful for characters, numerical data and static images
Class 5	4.66 to 10.29	Acceptable video performance	Useful for characters, numerical data, static images and low quality video (6 $\sqrt{2}$ shades of gray with counting off as 1)
Class 6	10.3 and higher	Best case video performance	Useful for characters, numerical data, static images and high quality video (eight or more $\sqrt{2}$ shades of gray with counting off as 1)