

7" FHD LED BACKLIT TFT DISPLAY

Sunlight Readability/Very Wide Range Dimming/Cool Operation

GENERAL DESCRIPTION

The ACD-KE070-3103 consists of the KOE/Hitachi TX18D200VM0EAA 7" FHD TFT display, modified with a high performance LED backlight.

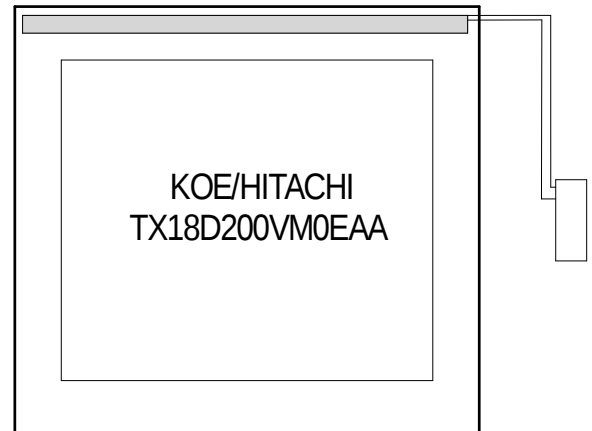
Performance at given luminance levels

1350 cd/m² with 6.9 watts LED power

Display outline identical to standard LED equipped panel

For most applications, satisfies sunlight readability goals

2/22/2022



LCD PANEL HIGHLIGHTS

7" TFT Active Matrix Color

155.52mm(H) x 87.48mm(V) viewable area

FHD 1920 x 1080 pixels, 16.7M colors

800:1 typical contrast ratio

Display Mode Normally Black

Physical Size 169.0mm(W) x 104.0mm(H) x 10.0mm(D)

For complete LCD specification (standard panel), refer to the datasheet KOE/Hitachi TX18D200VM0EAA

LED BACKLIGHT FEATURES

White LED edge-light rail

Single connector allows simple interconnect with LED driver¹

Projected lifetime > 75,000 hours

Designed to be driven by constant current.

¹ For best power transfer and control, use ACI-3104 LED Driver (Conformal Coated with Humiseal 1B73). Do not set the driver output current (Ifwd) higher than the value specified in the Maximum Ratings table of this document.

MAXIMUM RATINGS*

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Symbol	Parameter	Value	Unit
Top ¹	Operating temperature of display (center of panel surface)	-20 to +70	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +95	Deg-C
Tstg ¹	Display storage temperature	-30 to +80	Deg-C
IfwdD	LED forward current (Day)	108	mA

*Maximum Ratings are those values beyond which damage may occur

¹Per Manufacturer's Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 90mA per bank, 1 bank per rail, 1 rail per display. LED rail: ACR-0771-3106, Ta = +25 Deg-C moving air (36 CFM), LCD displaying full-white image, minimum 2 hour soak.

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Luminance		1080	1350		cd/m ²
X	White X coordinate			0.313		-
Y	White Y coordinate			0.343		-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 90mA per bank, 1 bank per rail, 1 rail per display, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		69	77	85	Vdc

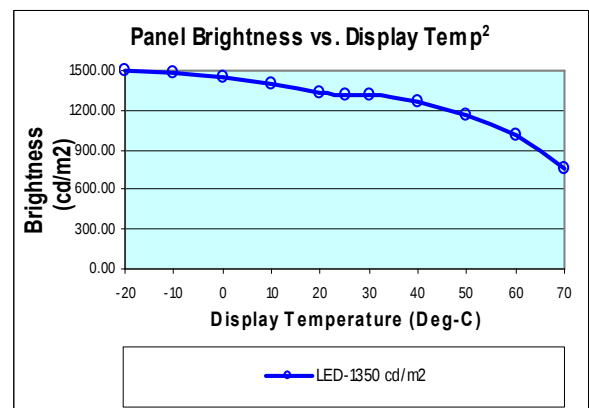
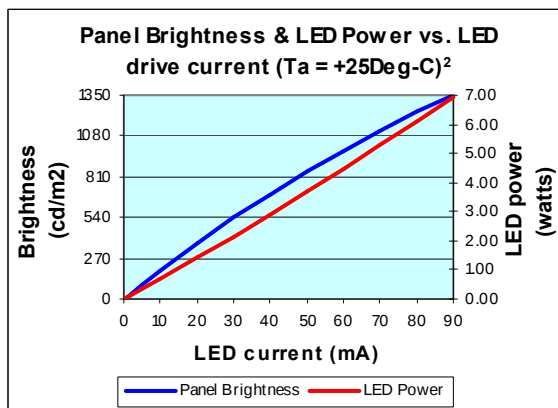
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PRODUCT DATA SHEET

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day



² Moving air (36.0 CFM)