

Black Pearl™ Display Module



MODULE FEATURES

Image

Resolution: 640 x 360 (nHD)
 Contrast Ratio 100:1 (Typ)
 FOV: 17 degrees diagonal

Optics

Eye Relief: 22.5 mm
 Exit Pupil: 8 x 5 mm
 Distortion: < 1%

Brightness

>1000 nits @ 10 mA to Backlight
 >2000 nits @ 20 mA to Backlight

Mechanical

Dimension: 31.5 x 14.8 x 8.0 mm

Drive Electronics

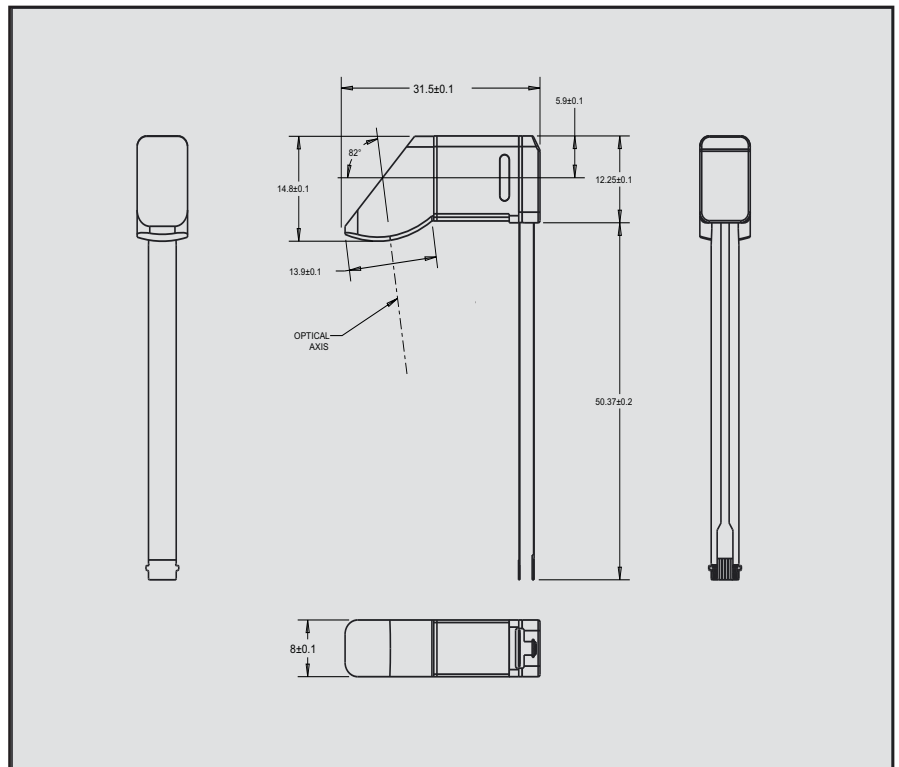
A914 or A913 ASIC

Power Consumption

(Display + BL + ASIC)
 <150 mW at 1000 nits
 <200 mW at 2000 nits

Black Pearl™ is a compact Display Module aimed for emerging wearable computing / communication devices. Integrating a transmissive LCD (640x360 resolution in 0.26" diagonal), efficient backlight and curved prism optics with nano-structures, Black Pearl provides a bright full-color image with less than 1% distortion in a 17-deg field of view and with 22.5 mm eye relief. Black Pearl and Kopin's A914 display driver ASIC together consume less than 150 mW at a display brightness of 1000 nits, sufficient for outdoor usage. The module's waterproof design supports a wide range of end use applications.

MECHANICAL DRAWING



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*Specifications subject to change without notice
 *Preliminary
 Rev. 3