NDF

SPECIAL LIGHT PRODUCTS

Simulator Display

Duplication of airplanes in the next 25 years; more simulator training facilities required.

NDF provides affordable “build to spec” LCD display solutions.

Represent a real aircraft

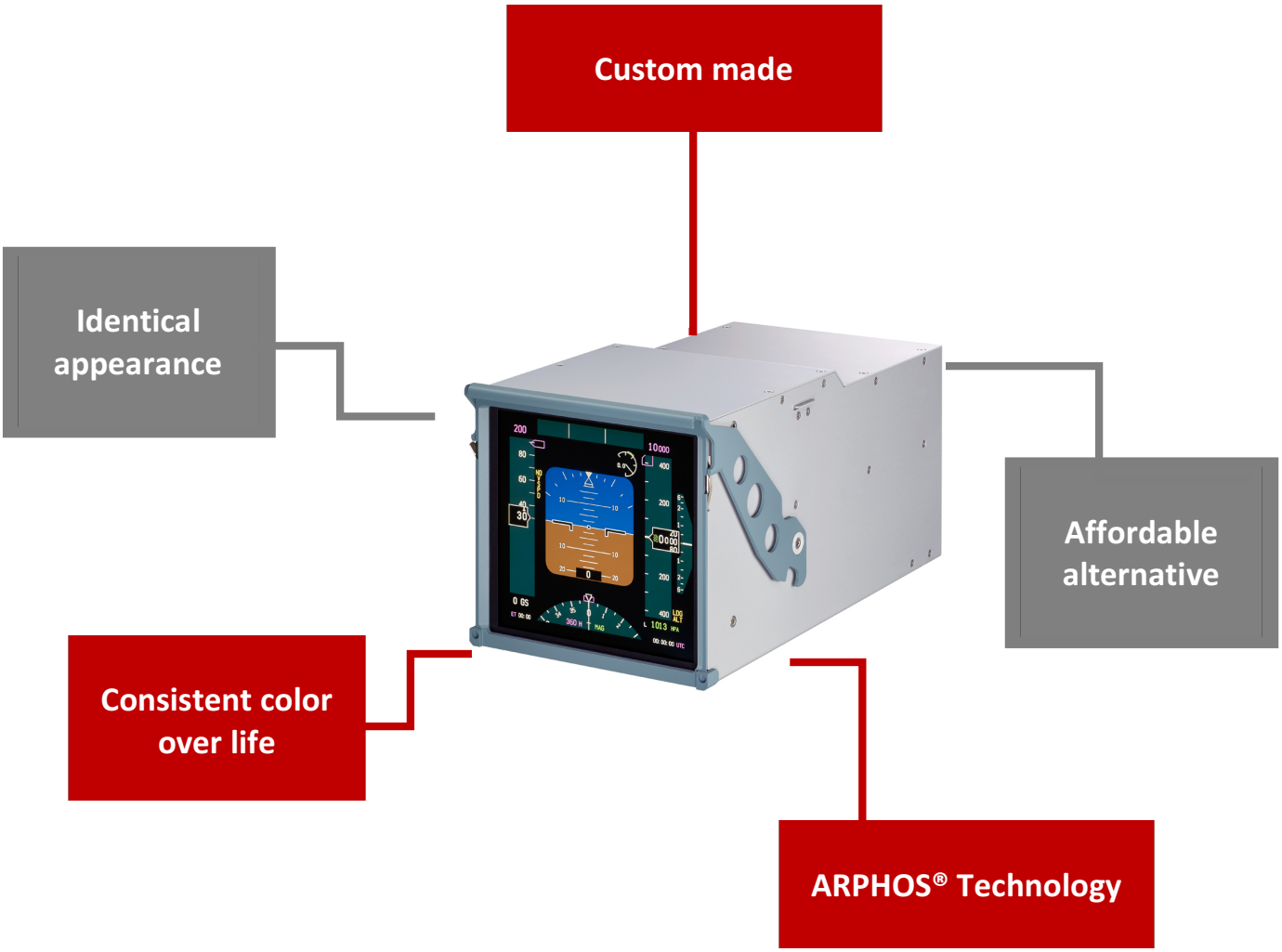
NDF Flight simulators have become increasingly higher in fidelity in the past decades, and their role in the initial and continuation training of pilots has increased as well. Cockpit Simulators are expensive investments and are operated as much as possible during their long lifetime. The displays in the cockpit needs to accurately represent the real aircraft and have high requirements on lifetime. Including real flight hardware in simulator is costly, so there is a trend towards the use of simulated hardware with lower costs and sufficient fidelity.

In a relatively new market area for NDF, we provide affordable “build to spec” LCD display solutions since 2014, which satisfy lifetime and fidelity requirements. NDF has access to world class LCD glass cutting technology, which enables NDF to provide tailor-made LCD displays in avionics sizes and aspect ratio’s which are usually not standard available in the mass LCD markets. With the NDF ARPHOS® backlight technology installed, lumen depreciation and color shift over lifetime are lower than with white LED based backlights.

Increasing demand

The aviation sector is rapidly growing. Current estimates predict a duplication of the number of airplanes in the coming 25 years! This automatically means that more and more pilots need to be trained and educated, which will result in an increasing demand for simulators. We can offer simulator displays of Boeing 737 and Airbus 320 (also available for Full Motion).

Displays available with or without casing



Design
'Build to spec' LCD display solutions.

Appearance
Identical appearance to actual aircraft.

Size
Tailor made to LCD displays in avionics sizes and aspect ratio's (not standard available in avionics market!).

ARPHOS® Technology
The NDF advanced backlight technology is based on color conversion by remote phosphor. ARPHOS® uses a blue-pump LED as a basic light source. The advantage of this very stable blue LED is, that its wavelength can be converted to visible light in almost every color that you wish – we are able to customize the color to your specific needs.
Furthermore, the stable phosphors are hardly stressed; lumen depreciation and color shift are therefore no issue!

ARPHOS® Technology is your solution if you are looking for:

- highest efficiency
- limited lumen depreciation
- high color consistency over lifetime
- no LED binning issues
- customized colors

Product specifications

Simulator display with ARPHOS® Technology		Boeing 737 NG	Airbus A320
Screen size		7,2” x 7,2”	6,25” x 6,25”
Optical	Active area Resolution / Pixel Luminance Lum. Uniformity Color point Display color Contrast ratio Panel type Panel manufacturer	184,32 x 184,32 mm 768 (H) x 769 (V) 400 Cd/m2 (typ.) 1,25 typ. X = 0,313 ± 0,050 Y = 0,329 ± 0,050 16.777.216 colors (@ 8 bit) 900:1 (typ.) TN NLT	157 x 157,8 mm 769 (H) x 773 (V) 400 Cd/m2 (typ.) 1,25 typ. X = 0,313 ± 0,050 Y = 0,329 ± 0,050 16.777.216 colors (@ 8 bit) 1:800 (typ.) TN SHARP
Electrical	Input Power Dimming ratio Video input	12 Volt DC 8,5 Watt 1:10 VGA or DVI-D	12 Volt DC 9,5 Watt 1:10 VGA or HDMI or Display port
Mechanical	Dimensions Weight Polarizer Surface Pencil hardness	198 x 198 x 65 mm 1800 g Clear 3H (by JIS K5600)	178 x 178 x 66 mm 1425 g Clear 3H (by JIS K5600)
Environmental	Operating temperature Humidity Directives	0 - 50°C 10 – 90% RH Compliant with ROHS, WEEE and CE directives	0 - 50°C 10 – 90% RH Compliant with ROHS, WEEE and CE directives

Versions

	Boeing 737 NG	Airbus A320
Article code	B0053.2	B0096.2

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