

## NEWS RELEASE



ElectroniCast Consultants

### Harsh Environment Fiber Optic (HEFO) Market Forecast

*According to ElectroniCast Consultants, the worldwide use of fiber optic components used in harsh environments is forecast to reach \$7.26 billion in 2027...*

**Aptos, CA (USA) – February 28, 2018** -- ElectroniCast Consultants, a leading market and technology research consultancy addressing the fiber optics communications industry, today announced the release of an extensive market study report of the global use of the fiber optic components, and supporting devices and parts, which are designed to operate in harsh environments, beyond the environment of commercial telecom and datacom (premise) installations.

According to the ElectroniCast study, the worldwide value of Harsh Environment Fiber Optic (HEFO) components reached an estimated \$2.74 billion last year (**see Figure 1**). In this new market study, for the first-time - ElectroniCast added the consumption totals of fiber point sensors used in harsh environments to the total value data.

The value of HEFO components are forecasted to increase at an average annual growth rate of 11.8% (2017-2022) and 8.6% during the 2<sup>nd</sup>-half of the forecast period (2022-2027), reaching \$7.26 billion in 2027. Market forecast data in this study report refers to consumption (use) for a particular calendar year; therefore, this data is not cumulative data.

The Military/Aerospace category is set to maintain the leadership position, in terms of value, throughout the forecast period; however in terms of volume (quantity of units), the Commercial/Industrial is set to maintain the dominant leadership position; HEFO components are priced relatively much lower in Commercial/Industrial applications versus Military/Aerospace applications.

Through the 1990-2000 decade, the harsh environment active fiber optic component consumption was dominated by system contractor's captive production. These components and parts typically were custom-designed for the specific application, starting from purchased commercial units, which were then modified (a substantial design effort) to meet the environmental requirements of a specific missile, spacecraft, aircraft or other system. Some of these system contractors now are transitioning into supplying these components to other contractors, and some commercial-component vendors are developing harsh environment versions of their commercial components. A major share of harsh environment fiber optic cable assemblies (both plastic and glass optical fiber based) are provided by connector vendors and by specialized cable assembly operations. An estimated 48% of the total worldwide value of \$2.74 billion is

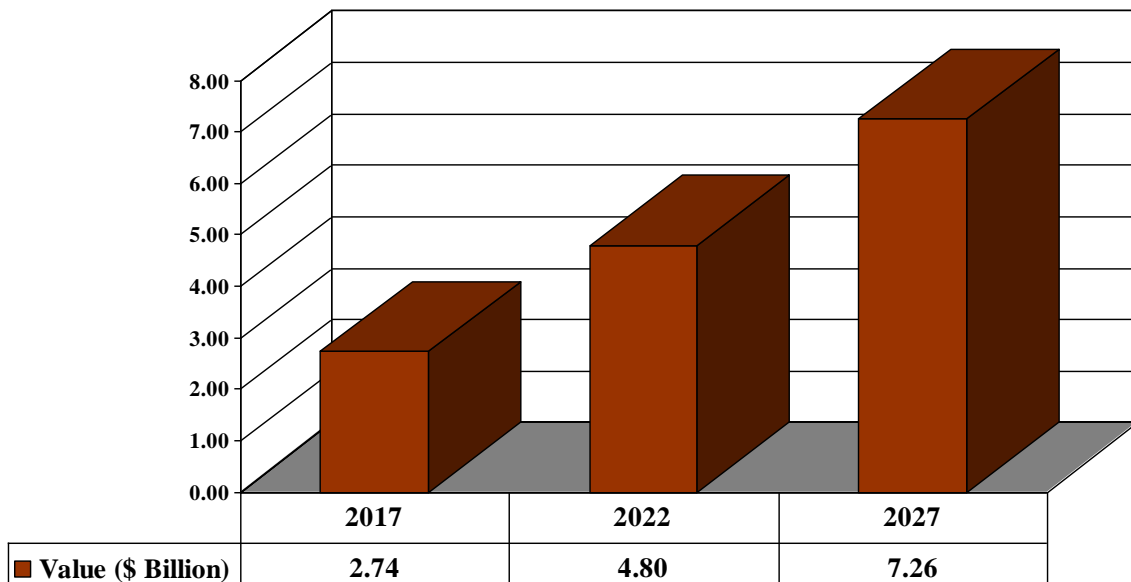
attributed to the “available” merchant market relative to industry standard product serving the “rugged” or harsh environment demand in 2017 (see Figure 2).

The environments encountered by the components in harsh environments often require custom designed packaging, with much smaller quantities required, compared to packaging of components for conventional/commercial applications. The environmental extremes that must be accommodated are greater, there often is a need for minimizing size and weight, and shock, temperature and vibration environments are more extreme.

In military and aerospace applications, the package must be verified, by extensive tests, to withstand the specified environmental extremes. These design, tooling and test/qualification costs often must be amortized over dozens to hundreds of packages, in contrast to the thousands to hundreds of thousands (and up) involved in commercial applications; therefore, the Global consumption of packages for production of harsh environment components and devices will expand at a modest rate (as design and qualification costs increasingly have been amortized over earlier production).

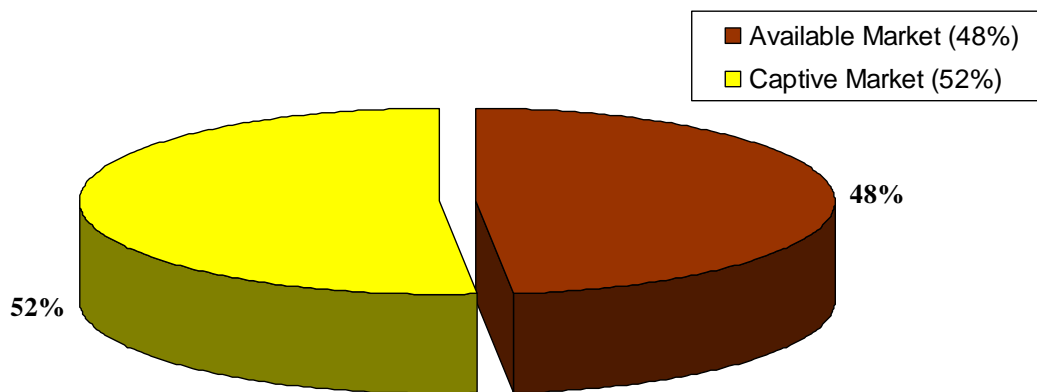
According to ElectroniCast Consultants, the worldwide forecast of fiber optic components used in harsh environments, including point sensors, will increase from an estimated \$2.74 billion in 2017 to \$7.26 billion in 2027 (Figure 1)

**Figure 1**  
**Harsh Environment Fiber Optic (HEFO) Component Market Forecast**  
Source: ElectroniCast Consultants



According to ElectroniCast Consultants, an estimated 48% of the total worldwide HEFO value of \$2.74 billion is attributed to the “available” merchant market relative to industry standard product serving the “rugged” or harsh environment demand in 2017 (see **Figure 2**).

**Figure 2**  
**HEFO Component Available vs. Captive Market**  
**2017 Global Consumption (\$2.74 Billion)**  
Source: ElectroniCast Consultants



This market forecast report, which is available immediately, is part of a consultant service from ElectroniCast Consultants to our clients. For detailed information on this or other services provided by ElectroniCast, please contact Theresa Hosking, Marketing/Sales; [thosking@electronicastconsultants.com](mailto:thosking@electronicastconsultants.com) (Telephone/USA: 831-708-2381)

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