

Corning optical fiber

Environmental Impact

Compared to one copper pair, a strand of optical fiber delivers increased bandwidth with:

84% Lower carbon footprint ¹

Cradle-to-gate comparison of optical fiber vs. twisted copper pair.

54% Lower power consumption ²

Access network comparison.



Keeping the world connected in the most sustainable way. Compared to copper, optical fiber can lower carbon footprint by at least 85,000 times when considering the same transmission capacity over the same reach ¹.

1. Sullivan et al. "A sustainable future with optical fiber." White Paper. Corning Incorporated, March 2023,
2. Eurocapable. (2022, Jul). *Fibre: the most energy-efficient solution to Europe's bandwidth needs.*

SMF-28[®] Contour optical fiber

Environmental
Impact



SMF-28[®] Contour optical fiber combines a **low 190 μm outer diameter** with improved bend resilience for smaller, lighter, easier to install cable solutions with up to **60% lower carbon footprint**¹.

ClearCurve[®] multimode optical fiber



ClearCurve multimode fiber is **the best techno-economic solution** in short-reach, high bandwidth AI/ML, data center, and IBN/LAN applications. Multimode fiber-based VCSEL transceivers consume up to **40% less power** than single-mode fiber solutions².



1. This impact was measured with an LCA conducted in accordance with ISO 14040 and 14044 standards and critically reviewed by an independent 3rd party comparing 288-fiber I/O MiniXtend[®] cable with Flow Ribbon Technology containing SMF-28[®] Contour fiber with 288-fiber FREEDM[®] UltraRibbon[™] cable.

2. Dong, Hao. "Multimode fiber for high data transmission and energy efficient next-generation data center." *White Paper*. Corning Incorporated, March 2022

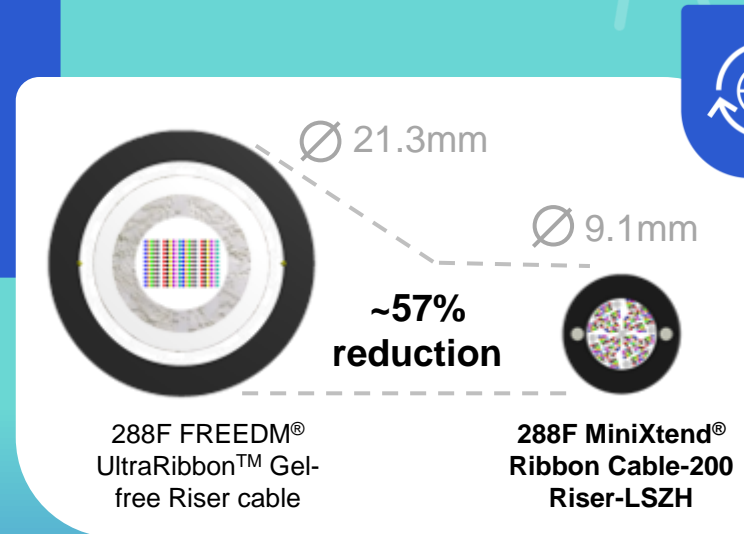
Corning optical cable

Environmental Impact

MiniXtend® cable with Flow Ribbon Technology containing 190 μm OD SMF-28® Contour fiber delivers:

60% Lower carbon footprint

LCA conducted in accordance with ISO 14040 & 14044 standards, reviewed by 3rd party

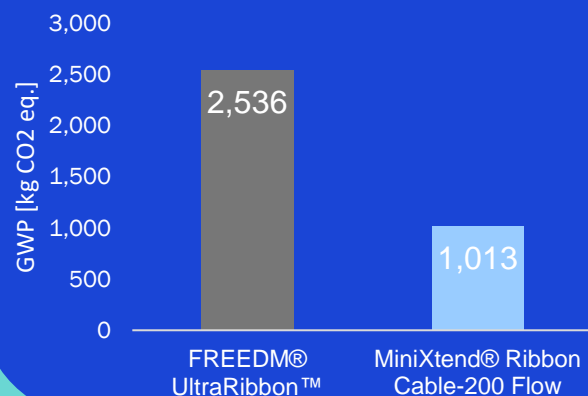


Designing for sustainability
Smaller, denser, & lighter cable designs with more efficient use of materials, packaging, & transportation result in a lower carbon footprint.

MiniXtend® cable with Flow Ribbon Technology

Environmental
Impact

Cradle-to-grave impact of 1km of 288F cable



Replacing 1 km of 288F FREEDM® UltraRibbon™ cable with 288F MiniXtend® Ribbon Cable-200 saves the **carbon footprint equivalent to 6,250 km** driven by an average passenger car ¹



In the next **3 to 5 years**, we aspire to use **100% renewable energy** in our U.S. and European operations – enabling further reduction in carbon footprint of cables manufactured in these regions

Source: This impact was measured with an LCA conducted in accordance with ISO 14040 and 14044 standards and critically reviewed by an independent 3rd party.

1. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

MiniXtend[®] cables



MiniXtend HD cable (12-72F) delivers a **17% reduction in cable diameter** compared to standard MiniXtend cable, increasing fiber density by 44% with up to **20% lower carbon footprint**.

MiniXtend XD cable delivers a **15% reduction in cable diameter** compared to MiniXtend HD cable to maximize duct space with up to **12% lower carbon footprint**.

ALTOS[®] HD cable



ALTOS HD cable features 24 fibers per buffer tube, offering reduced outer diameter and weight, and up to **30% lower carbon footprint** than legacy ALTOS cable.

Source: This impact was measured with an LCA conducted in accordance with ISO 14040 and 14044 standards and critically reviewed by an independent 3rd party

Corning data center solutions

Environmental Impact

EDGE™ Distribution System minimizes hardware materials and consolidates patch cords to deliver:

55% Lower carbon footprint

Compared to legacy solutions. LCA conducted in accordance with ISO 14040 & 14044 standards, reviewed by 3rd party

EDGE™ Rapid Connect eliminates field splicing & multiple cable pulls to deliver:

25% Lower carbon footprint

Compared to legacy solutions. LCA conducted in accordance with ISO 14040 & 14044 standards, reviewed by 3rd party



Designing for sustainability
Pre-connectorized solutions with reduced packaging accelerate installations while reducing carbon footprint.

Corning Configured Rack

Environmental
Impact



Reduces packaging materials up to 53% per rack, minimizing waste while maximizing shipping efficiencies to deliver **24 racks per full truck load**.

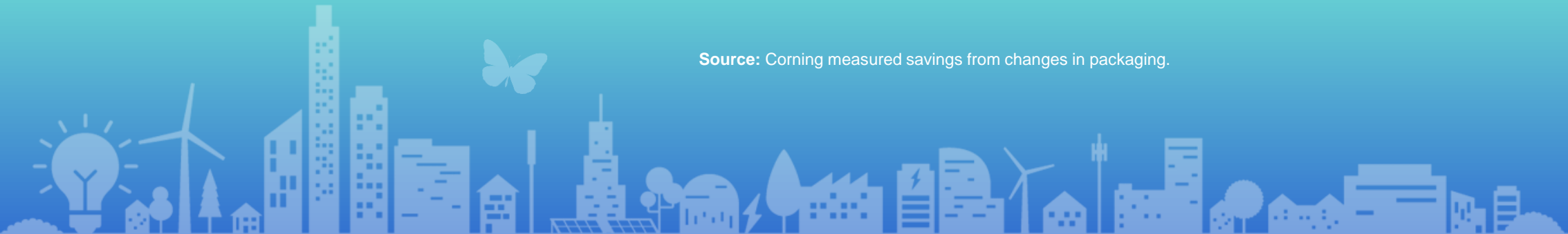
EDGE™ & EDGE8®



Preloaded housings reduce packaging material per 4U by up to 50%, minimizing waste while enabling up to **75% more product per pallet** to maximize shipping efficiencies.

Modules reduce packaging material up to 50%, minimizing waste while enabling up to **45% more product per pallet** to maximize shipping efficiencies.

Source: Corning measured savings from changes in packaging.



Corning carrier network solutions

Environmental
Impact

Evolv[®] FlexNap[™] with Multifiber Pushlok[™] Technology decreases required duct size to deliver:

50% Lower
carbon
footprint ¹

Based on duct material reduction from 2" to 1.25"

Designing for sustainability

Customized and smaller form factor architecture for simplified builds that utilize less duct materials and lower carbon footprint.

1. Carbon footprint estimates calculated internally based on reduction of plastic materials from 2" duct to 1.25" duct transition