STL

celesta

Intelligently Bonded Ribbon

Product Brochure

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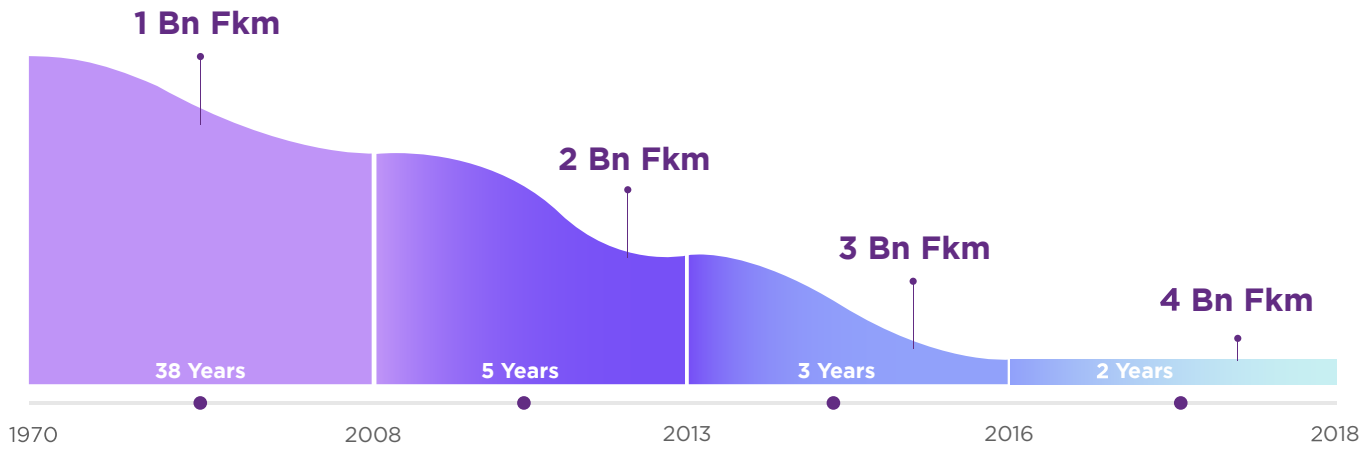
Connecting the next billion

In the last 20 years, world population has grown by just 1.3% while optical fibre cable deployment has grown by ~14%. The figure below shows how the roll out of fibre has been galloping – time taken to lay 1 bn FKm (Fibre Km) shrunk from 38 years to less than two years by 2018. Considering the connectivity urgency driven by 5G and FTTx investments, the next 1 bn FKm is likely to take significantly less time now.



World's rate of deployment of **1Bn Fkm Cable** has shrunk drastically from **38 years to less than 2 years**

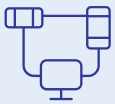
Countries across the globe had been on a steady broadband agenda with their respective spectrum reallocation or wireline network investments.

Multi-Gigabit, Ubiquitous Connectivity – A NOW-requirement

To run enterprise-grade connectivity from homes for online education, work, shopping, entertainment

Suburb connectivity levels in parity with commercial centers

For fixed, mobile and broadcast network convergence



Interconnected objects and devices to enable the Internet of Things

Network providers, worldwide, pivoted almost instantaneously to meet the surge in demand. But what was initially thought to be a short-term arrangement, has now given way to an increased acceptance that the exponential demand on networks is here to stay. Be it 5G, or FTTx, or data centers, the appetite for bandwidth is increasing by leaps and bounds. In today's common parlance, super-fast, steady connectivity will be a basic requirement in the 'new world' order.

Providers, therefore, have no recourse but to gear up for networks that comply with the 3Rs

3Rs

Reliability
High on service quality and low losses

Resilience
Zero downtime

Ready-for-Future
Next gen technology compatible

They have to achieve the 3Rs by deploying networks swiftly while at the same time optimising space. For, while the bandwidth demand is unlimited, space availability is not. Networks have to be smarter – they have to hold more optical fibre within the same available space.

Meeting these criteria of time and space are the high-density Optical Fibre Ribbon Cables. These new-age, innovative ribbon cables address the 3R requirement. They are reliable, resilient and are ready for future needs of the network because of their smart design that offer:

STL Celesta ribbon cable is better and smarter than traditional loose tube cables and flat ribbon cables, Celesta ribbon cable offers an outstanding solution for demanding, high-growth, high-bandwidth communications applications.

STL Celesta Ribbon Cables are new age cables that offer a technology leap in terms of size and space requirements. They have found wide application at data centers, equipment connections within cabinets, outside plant applications.

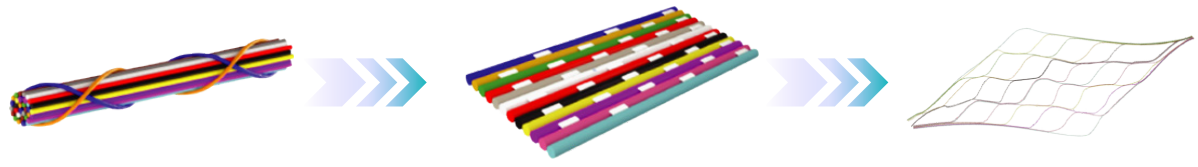
STL Celesta Ribbon Cables are compliant with international performance and testing standards

IEC 60794-5-10	ITU-T	RoHS	REACH

Innovative slim design optimises duct space utilisation

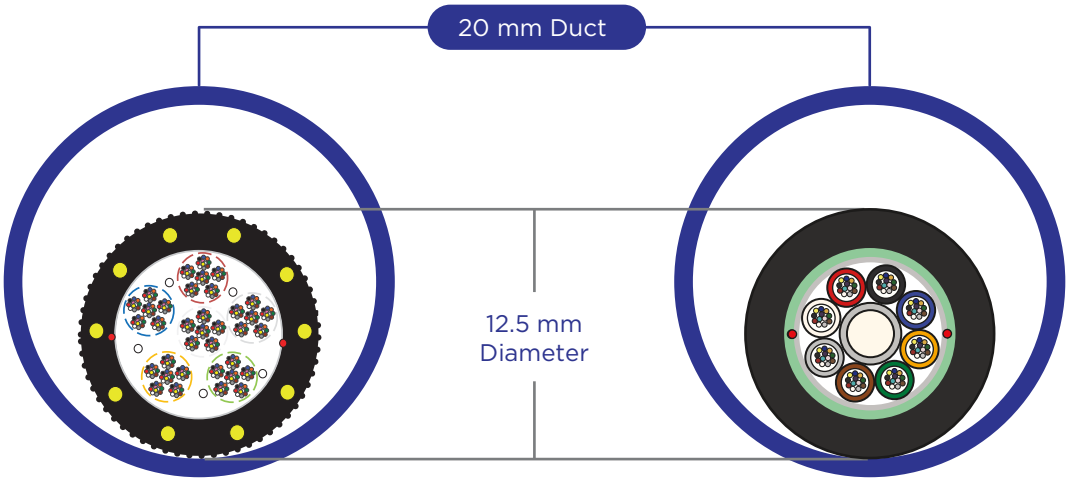
In Celesta, ribbons take the shape of a bundle because of their intelligently bonded design. This results in improved form factor of the cable.

432F Celesta Ribbon cable is as much as **26% slimmer** than a conventional multi-loose tube cable with the same number of fibres.



4X better duct utilisation

High-density ribbon cable packs more fibre in the same cable diameter and helps improve duct space utilisation by as much as 4X as compared with a conventional MLT cable



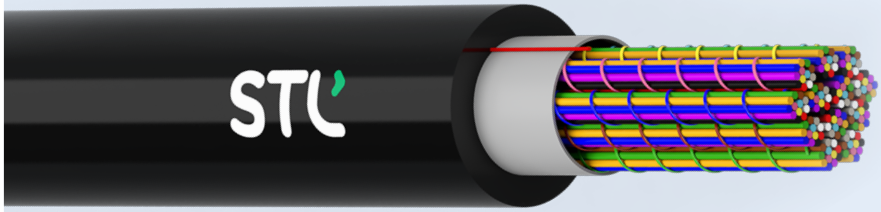
432F
Celesta Ribbon Cable

96F
Conventional MLT cable

Easily fits inside 20mm duct

This is an ideal solution for application in space constraint locations. The 432F Celesta Ribbon Cable can be easily blown inside a 20mm duct. This is about 30 percent lesser High-Density Polyethylene (HPDE) material under the ground and helps reduce carbon footprint.

Installer-friendly design help operators roll out network faster



Install upto 2 Km of cable within 1 hour

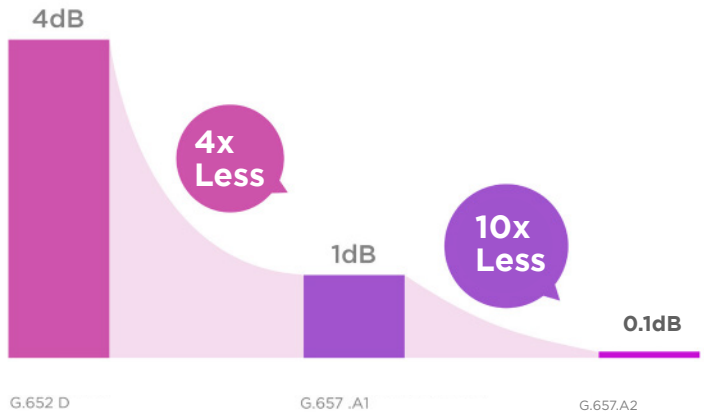
Celesta Ribbon Cable is blow optimized, has kink-free design with innovative sheathing and non-preferential bending. Installers can install upto 2 Km of cable within 1 hour inside a 20mm duct.

Cable preparation in less than 3 minutes

The multiple peripheral strength members inside the sheath of optical fibre ribbon cables provide crush protection and are rodent resistant. Its gel-free, water-blocking and contra-helical binding cable design reduces the cable preparation time for splicing. Cable-end preparation can be done under 3 minutes and mid-span access in 13 minutes.

Once the cable has been laid inside the duct, installation of the cable is truly an installer's delight. With Celesta Ribbon Cables, the installation process takes 80% lesser time as compared to installing a conventional loose tube cable with same fibre count.
Celesta with its innovative colour-coded bonded design results in easier and faster ribbon identification. This ensures first time right splicing even with semi-skilled manpower. The ribbon fibres are compatible with existing and new fusion splicers. The collapsible ribbon design transforms quickly into a flat ribbon resulting in five times faster splicing than a MLT cable. This can result in huge savings in time and labour cost.

Future-proffing network set to optimise project cost



1 turn 7.5 mm mandral radius @1550 nm wavelength

Celesta ribbon cable is made using future-ready G.657.A2 bend insensitive optical fibre and offers industry's lowest attenuation in ribbon cables.

With improved network performance and power budget, network becomes resilient to bends and cuts. After commissioning of the network, as much as 18 additional repairs can be done.

This can **enhance networks life by up to 10 years,** thereby improving the ROI.

Saves upto 32% cost

With superior bend performance, cable and fibres can have a much smaller bend radius. This provides ease of handling in manholes and handholes. This also helps further improve the TCO with the reduced the size of passive infrastructure.

STL Celesta's light weight design helps operator reduce the logistics cost. Smaller form factor results in smaller reel size which optimises the storage and shipping cost, resulting in enormous capex and opex savings.

Operators can expect a **cost saving of 32% in the overall investment.**

Need of the hour!

Not with standing stark digital divide across countries, most countries around the world are on their respective digital path. Already recipients of massive budget allocation, network augmentation and enhancement will witness further rise in investments. In Europe, for instance, the Connecting Europe Facility (CEF2) digital programme " aims to support and catalyse investments in digital connectivity infrastructures of common interest during the period 2021-2027 ". Policy makers have gone on record committing to providing high-quality access to Gigabit networks to all people, businesses and "socioeconomic drivers" such as schools, universities, hospitals, transport hubs and public administrations . In the United States of America, counted amongst the largest online markets of the world with internet user penetration at 85.8 percent, Connecting America: The National Broad-band Plan, aims to take broadband to households, institutions, government organisations to fuel their progress and ensure their safety. Even if the scale and speed of investments may differ, the narrative is similar in other countries and regions of the world.

Optical fibre ribbon cables offer the perfect solution to the present-day world riding this heightened urgency for connectivity. Optimising costs, infrastructure availability, installation time and thereby maximising investments, these high-density cables come in as game changers in the bandwidth arena. And are set to change the narrative of digital preparedness.

About STL

We bring ultra-fast connectivity to all of us

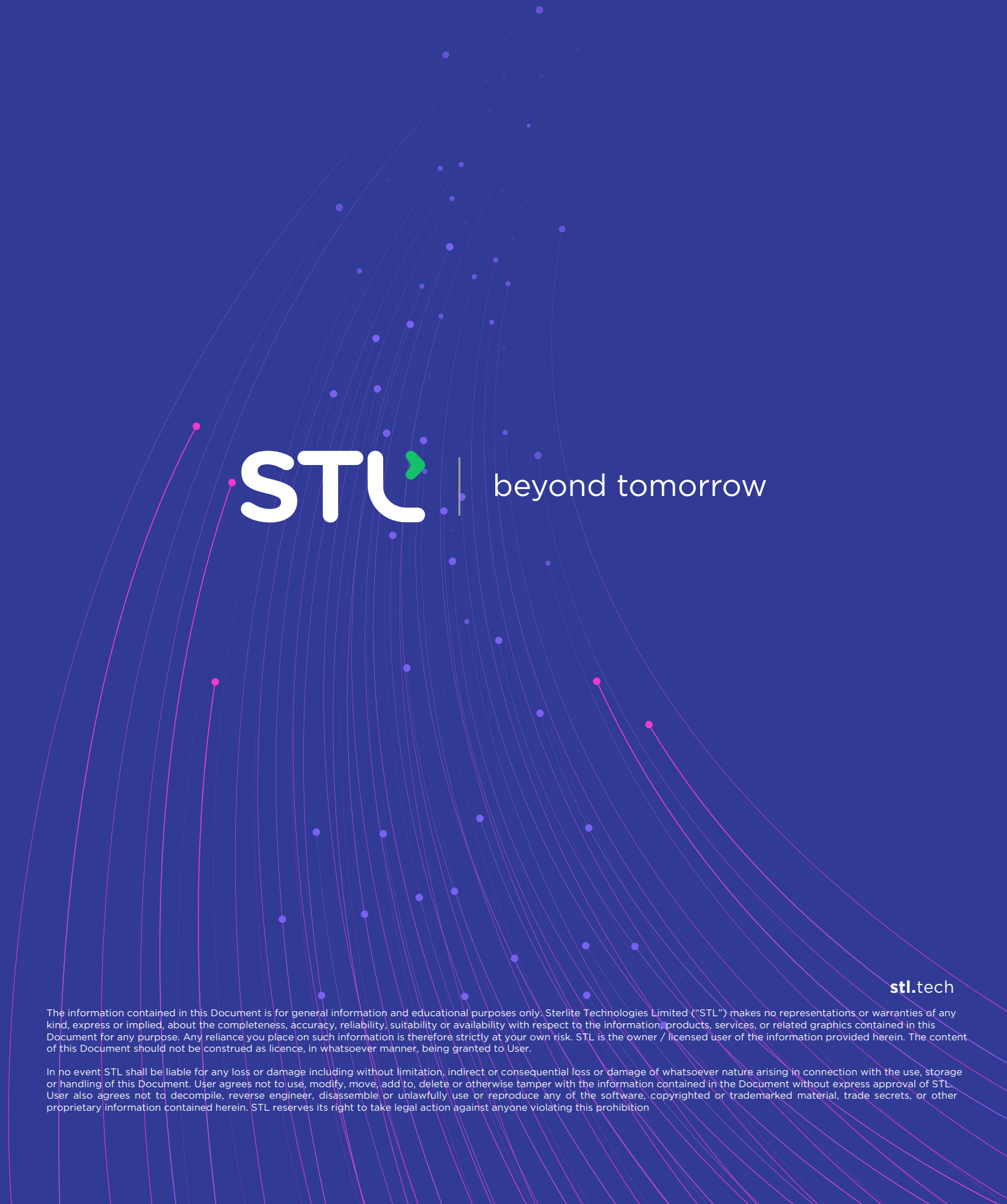
We are the only company in the world to have unique capabilities across all layers of the network. From photonics and material science-based precision manufacturing to algorithmic design, ultra-fast deployment, AI analytics and programmable networks. We believe in harnessing technology to create a world with next generation connected experiences that transform everyday living. With intense focus on end-to-end network solutions development, we conduct fundamental research in next-generation network applications at our Centres of Excellence. We have four innovation centers for core research in optical fibre ultra-high speed connectivity and applied research on smarter networks. At last count, we had a global patent portfolio of 376 to our credit for optical connectivity, network services, and virtual mobile edge solutions.

Innovation is at the core of everything we do

We have a strong global presence and have historically supplied to over a 100 countries! Today, we are a $736 Mn. company (FY 20 revenue), with almost 34% of our revenues being export driven. On the supply side, we have next-gen optical preform, fibre and cable manufacturing facilities in India, Italy, China and Brazil, along with two software-development centers across India and one datacentre design facility in the UK. Our manufacturing facilities are world-class and we are the world's first integrated optical fibre and cable manufacturer to be Zero Waste to Landfill certified.

We are leading the future of networks

Over 3,000 people - we call ourselves STLers - from across 30 nationalities work with us. We are a Great Place to Work!! Together with our customers and partners, we STLers are taking digital networks and humanity beyond tomorrow.



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