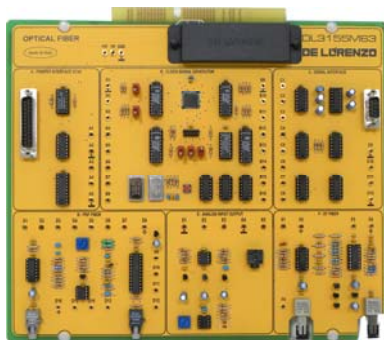


TIME ELECTRONIC BOARDS

FIBRE OPTICS



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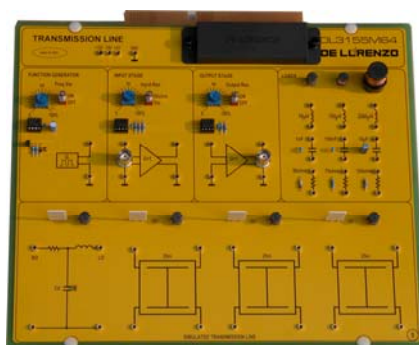
Theoretical topics:

- Introduction to fibre optics communication
- Attenuation
- Numerical openings
- Propagation methods
- Transmitted power specifications
- Chromatic and modal dispersion
- Cable attenuation specifications
- Received power specifications
- Time division (TDM) and wave length division(WDM) transmission
- Fault simulation

Circuit blocks:

- Clock signal generation
- Serial interface
- ST fiber
- Analogue input / output
- POF fiber
- Printer interface

TRANSMISSION LINE



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Theoretical topics:

- Familiarization with the transmission line theory
- The four terminal model of the transmission line (Equivalent circuit model)
- Input impedance of lossless transmission line
- Special cases of a transmission line (Half-wave and quarter-wave lengths, matched, shorted and open load)
- Stepped transmission line
- Practical types of transmission lines (Coaxial, microstrip, stripline, balanced, single wire, waveguide and optical fiber)
- Measuring the characteristics of a transmission line
- Measuring the attenuation of a transmission line
- Frequency characteristics of a transmission line
- Stationary waves
- Fault simulation

Circuit blocks:

- Function generator
- Input and output stages
- RLC simulated transmission line of 100m (4*25m)
- R loads
- L loads
- C loads