



European electro-optic and nonlinear PIC platform based on lithium niobate on insulator (LNOI)

ELENA will develop the first European LNOI PIC (photonic integrated circuit) platform, accessible to all interested entities in the form of an open foundry service.

ELENA's ambition is to establish the key steps of a fully European supply chain to support the LNOI PIC platform. This includes:



ESTABLISH

a process to produce 150 mm optical grade LNOI wafers on an industrial scale



MATURE

a reliable wafer-scale fabrication process for low-loss LNOI PICs for the foundry offering



DEVELOP

a reliable and flexible packaging solution to interface LNOI chips with optical fibers and other PIC platforms



DESIGN

the world's first process design kit (PDK) library of standard PIC building blocks for the LNOI platform and make it accessible through PIC design software



DEMONSTRATE

the technology and validate the results by developing 4 PIC prototypes designed by 3 "end-user" partners covering telecom, quantum technologies and microwave photonics

THE PROJECT



STARTING DATE

01/01/2022

PROJECT ACRONYM & TITLE

ELENA

European electro-optic and nonlinear PIC platform based on lithium niobate



10 partners



DURATION

42 months



CALL / TOPIC

Advancing photonics technologies and application driven photonics components and the innovation ecosystem / novel PIC technology building blocks



3 European countries



GRANT / BUDGET

5 M€

COORDINATOR

Dr Amir Ghadimi | CSEM
amir.ghadimi@csem.ch

GA NUMBER

101016138

CONSORTIUM

csem

soitec

VPI photonics

ETH zürich

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