HARPIA | TG



Transient Grating Spectrometer



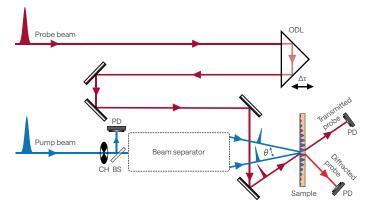
Carrier diffusion coefficient in a matter of minutes Non-invasive measurement technique Fully automated and computer controlled Continuous setting of grating period Sensitivity down to µJ/cm² excitation level

and analysis software

Advanced measurement

Photoluminescence (PL) measurement option

HARPIA-TG principal scheme



BS - beam splitter

CH - chopper

PD - photodiode

ODL - optical delay line

- parabolic mirror

- intersection angle

- delay

Specifications

Measurement mode	Transmission	Reflection
Grating recording wavelength 1)	340 – 560 nm	
Probe wavelength 2)	1030 nm	
Grating period 3)	1.05 – 12.5 μm	1.5 – 4.5 μm
Pulse duration	< 290 fs	
Delay range	Up to 8 ns	

MEASUREMENT RANGES

Diffusion coefficient	≥ 0.1 cm²/s
Carrier lifetime	3 ps – 8 ns

DIMENSIONS

Physical dimensions (L × W × H)

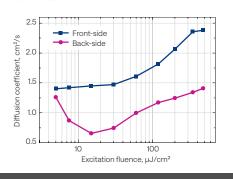
730 × 420 × 188 mm

- ¹⁾ Extendable to 750 nm by applying different physical gratings. Contact sales@lightcon.com for more details.
- ²⁾ OPA-based probe is available upon request. Contact sales@lightcon.com for more details.
- 3) Depends on the pump wavelength.

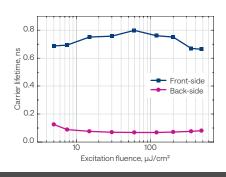


Performance

Diffusion coefficient of GaN as a function of fluence



Carrier lifetime of GaN as a function of fluence



Diffusion length of GaN as a function of fluence

