

*Meeting Calocube*

*12 Novembre 2015*

# Misure ottiche: Assorbimento ottico e Radioluminescenza

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# Elenco campioni

Label	Nome	Type	Serial	Grower	Size (mm <sup>3</sup> )
CC-01	CaF <sub>2</sub> :Eu	V37C37-CAF	SFO431	Scionix	37x37x37
CC-02	BaF <sub>2</sub>	V31C31-BAF	SFN949	Scionix	31x31x31
CC-03	PWO			Moltech	20x20x20
CC-04	BGO			CERN	20x20x20
CC-05	LYSO			China	20x20x20
CC-06	YAG:Ce	SBK10B 10x1	150319	Crytur	∅10x1
CC-07	LuAG:Ce	SBK15B 10x1	150321	Crytur	∅10x1
CC-08	CsI	M.C/03-36.36.36	001 10.14	Detec	36x36x36
CC-09	CsI:Tl	M.CT/03-36.36.36	111 10.14	Detec	36x36x36
CC-10	CsI:Tl	M.CT/03-36.36.36	067 04.14	Amcrys	36x36x36
CC-11	CsI:Tl	M.CT/03-10.10.10	001 07.14	Amcrys	10x10x10
CC-12	CsI:Tl	M.CT/03-10.10.5	001 07.14	Amcrys	10x10x5
CC-13	CsI:Tl	M.CT/03-10.10.2	001 07.14	Amcrys	10x10x2
CC-14	CsI:Na	M.CN/03-36.36.36	002 10.14	Detec	36x36x36

# Condizioni di misura:

## Radioluminescenza

- Eccitazione: Raggi X, 20 kV bersaglio di Tungsteno (lo spessore irraggiato è inferiore allo spessore del campione più sottile)
- Rivelazione: CCD UV-enhanced, retroilluminato, raffreddato con azoto liquido
- Spettri corretti per la risposta spettrale del sistema

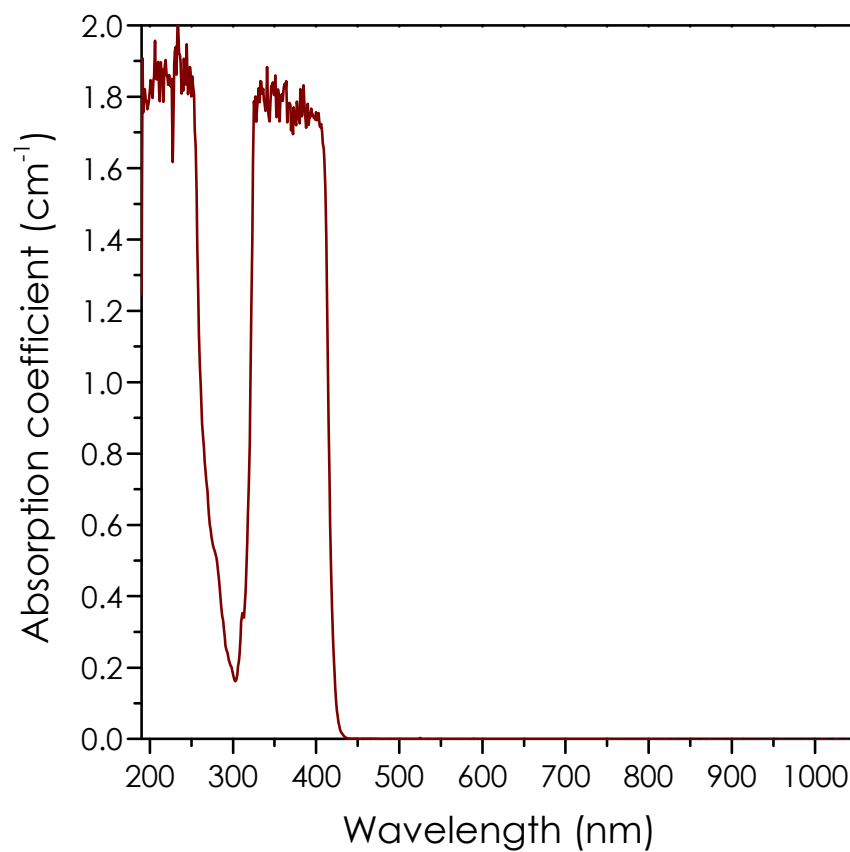
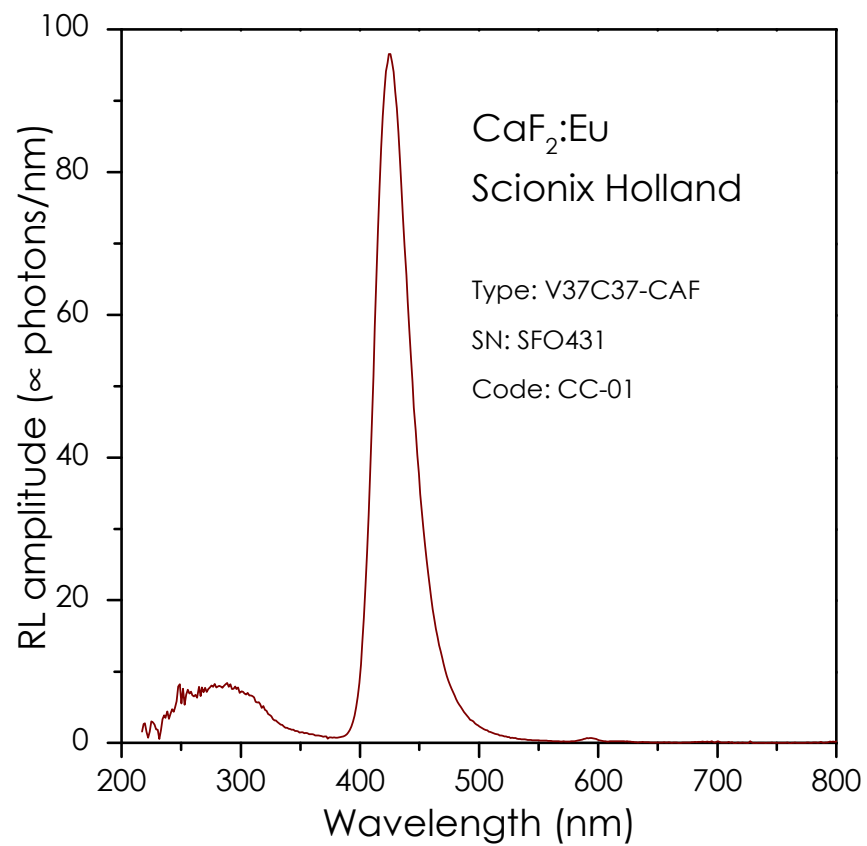
## Spettri di assorbimento

- Corretti tenendo conto della riflettività
- I campioni igroscopici non hanno superfici ben lucidate
- Il BGO non ha due facce opposte lucidate (solo 1 su 6)

CaF<sub>2</sub>:Eu

Scionix

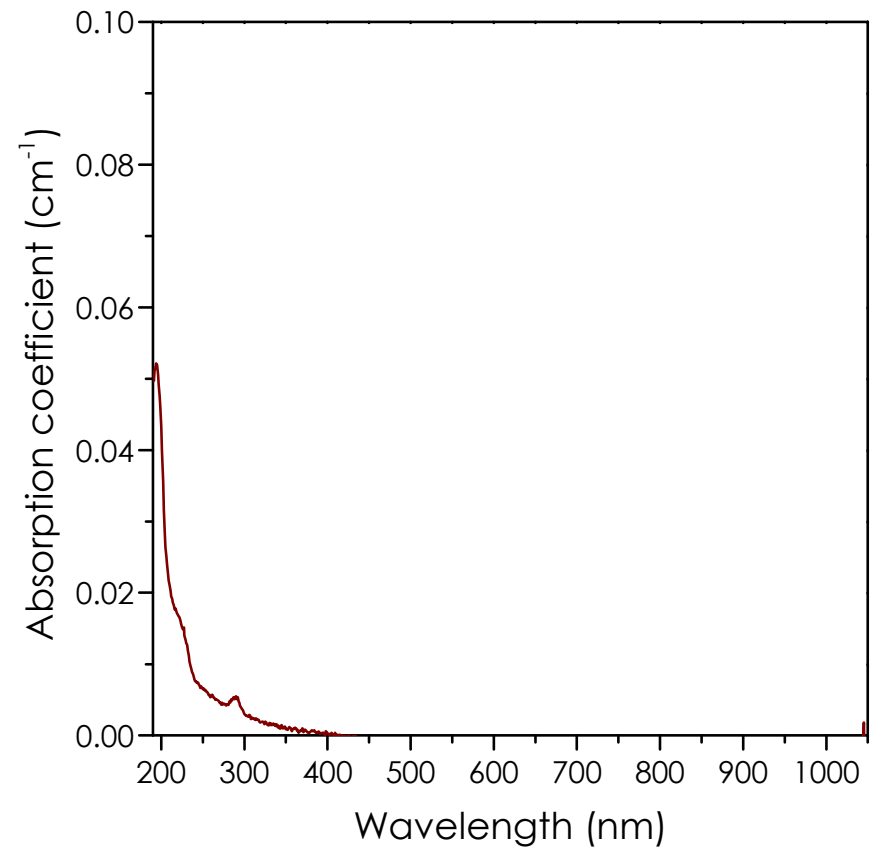
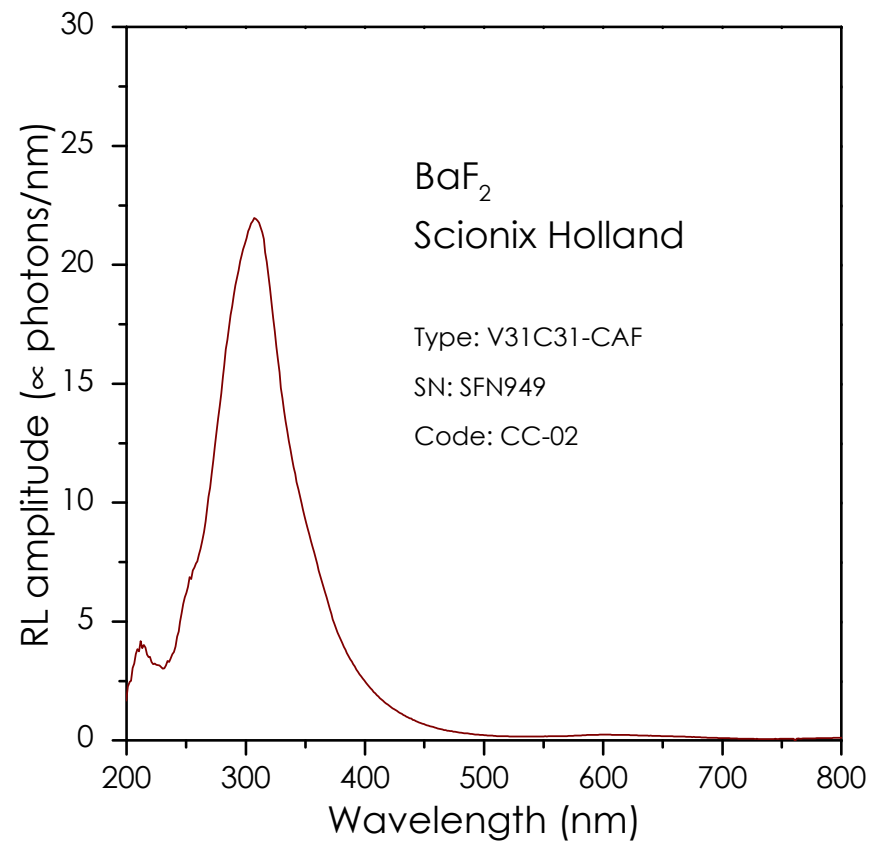
37x37x37 mm<sup>3</sup>



BaF<sub>2</sub>

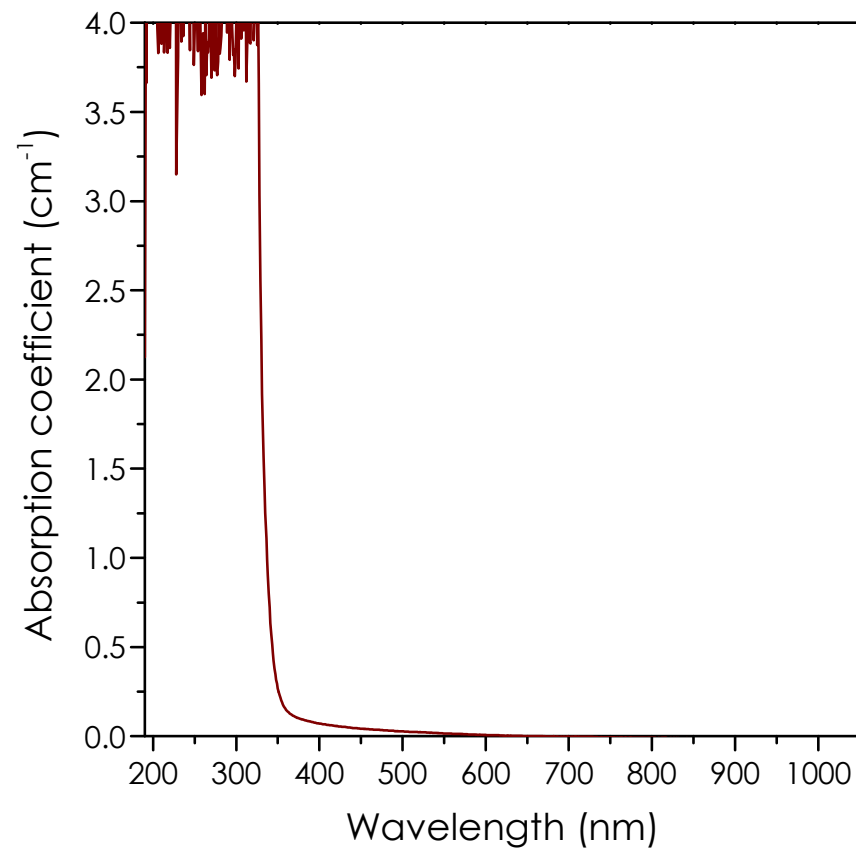
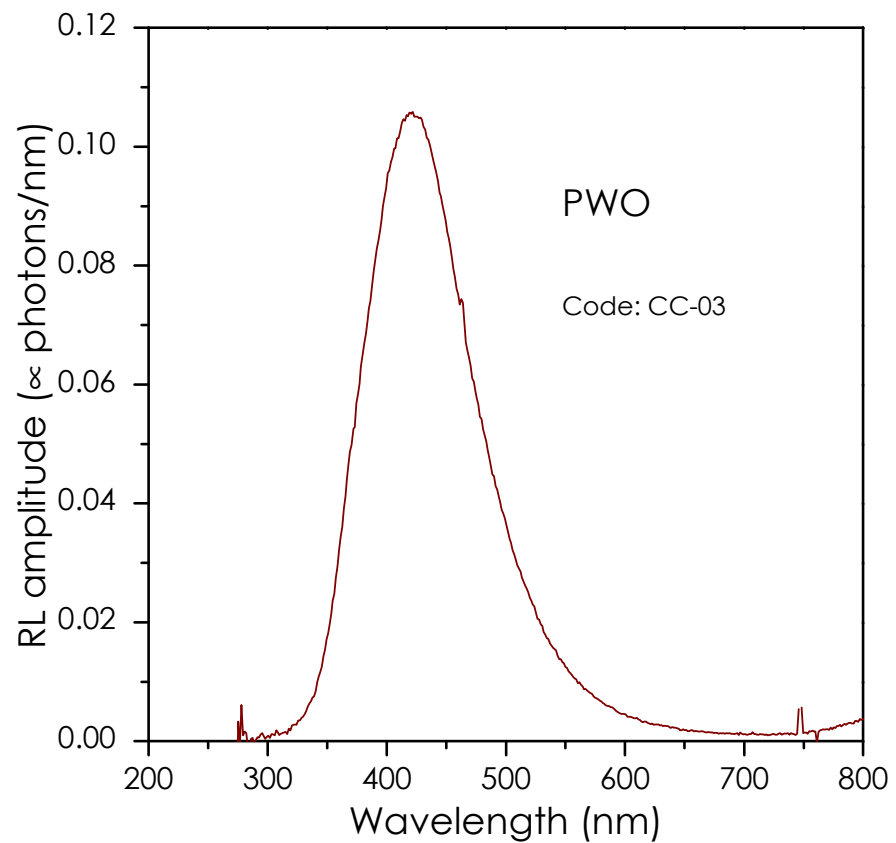
Scionix

31x31x31 mm<sup>3</sup>



PWO

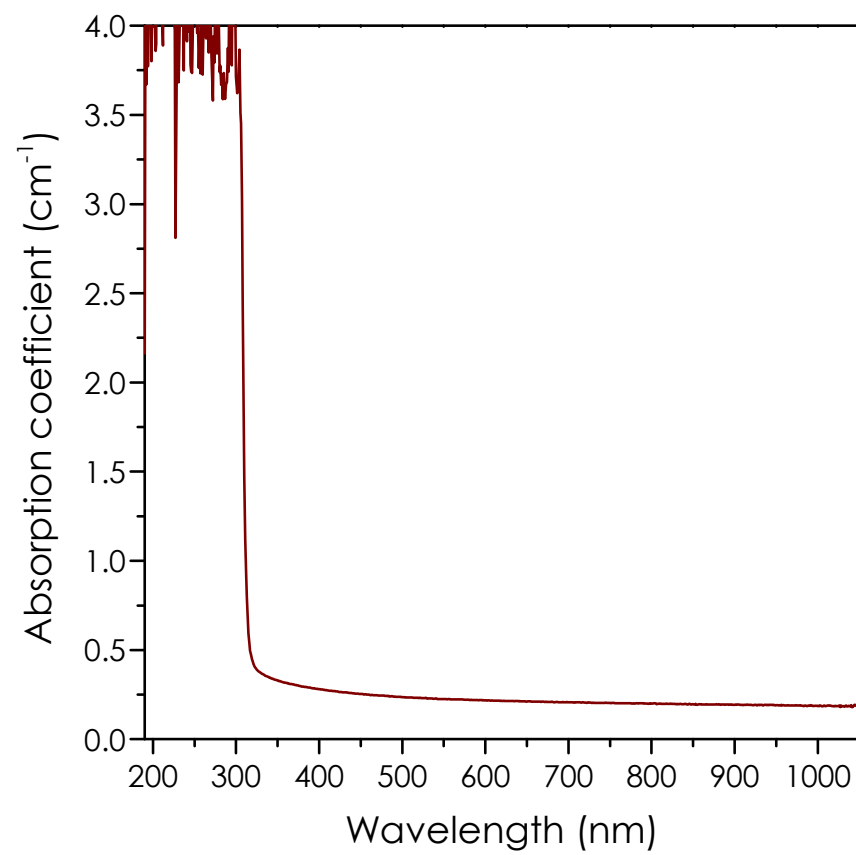
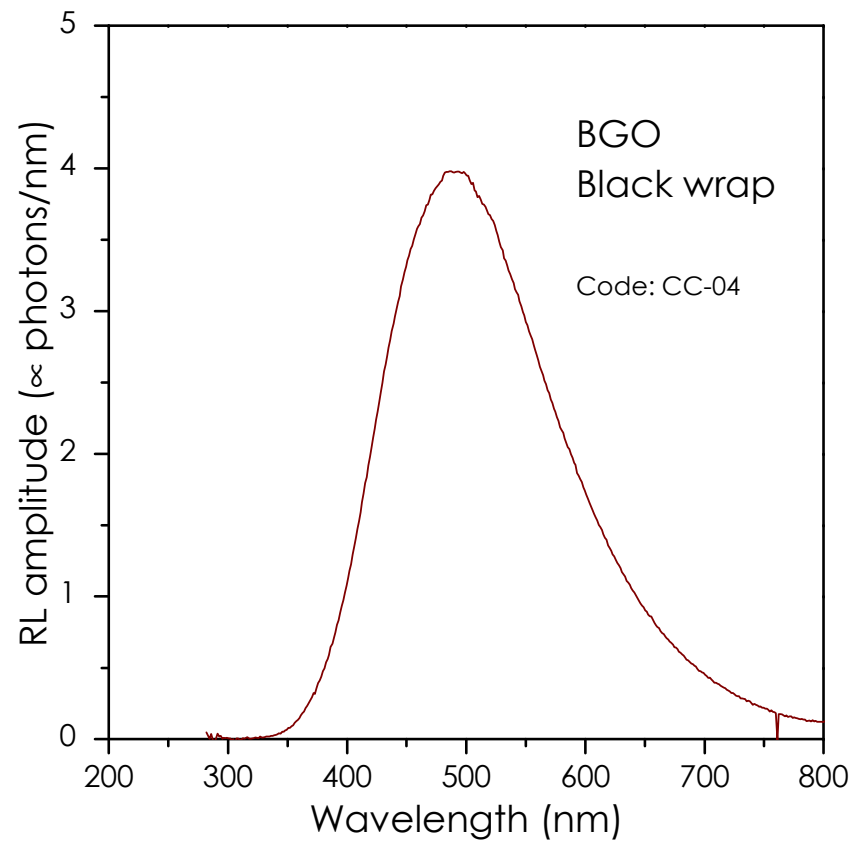
Moltech 20x20x20 mm<sup>3</sup>



BGO

CERN

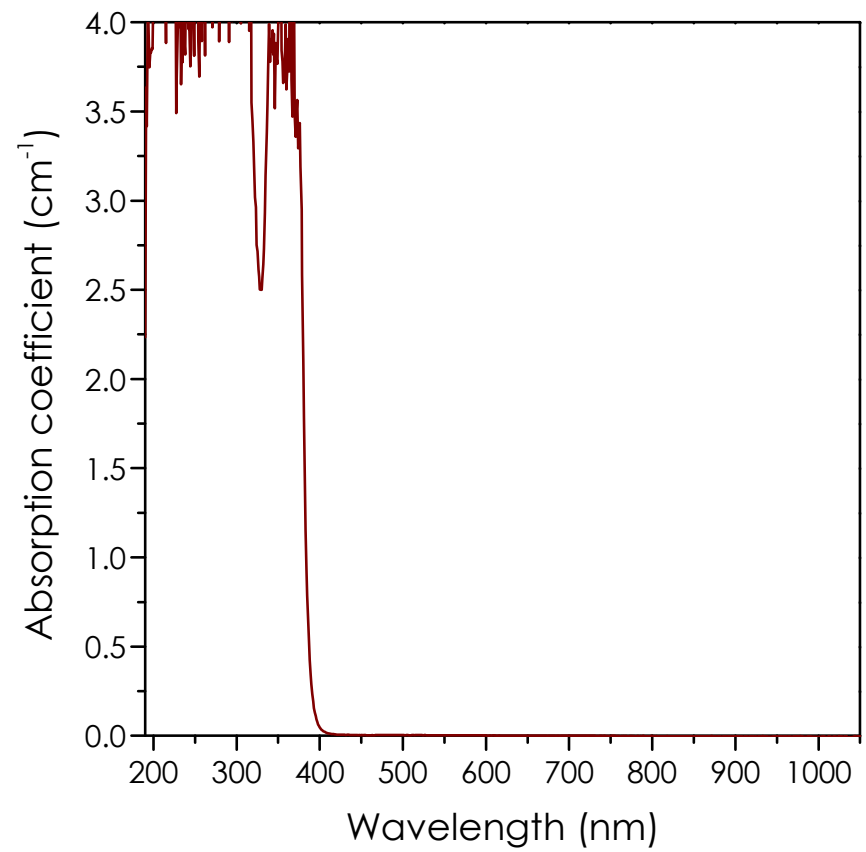
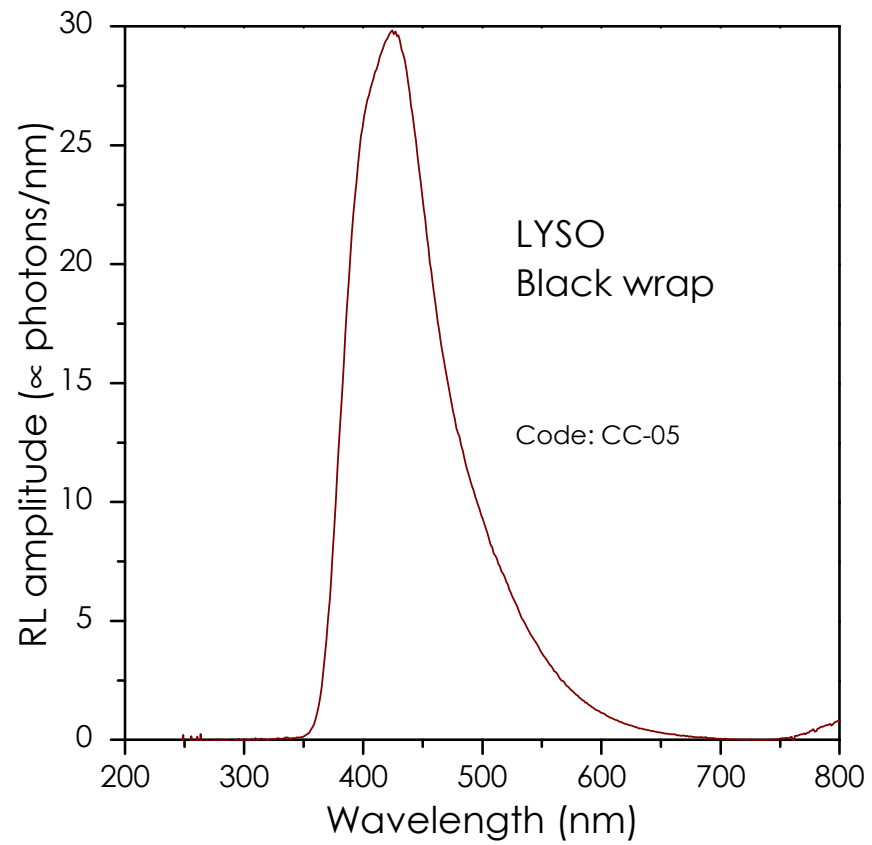
20x20x20 mm<sup>3</sup>



LYSO

China

20x20x20 mm<sup>3</sup>

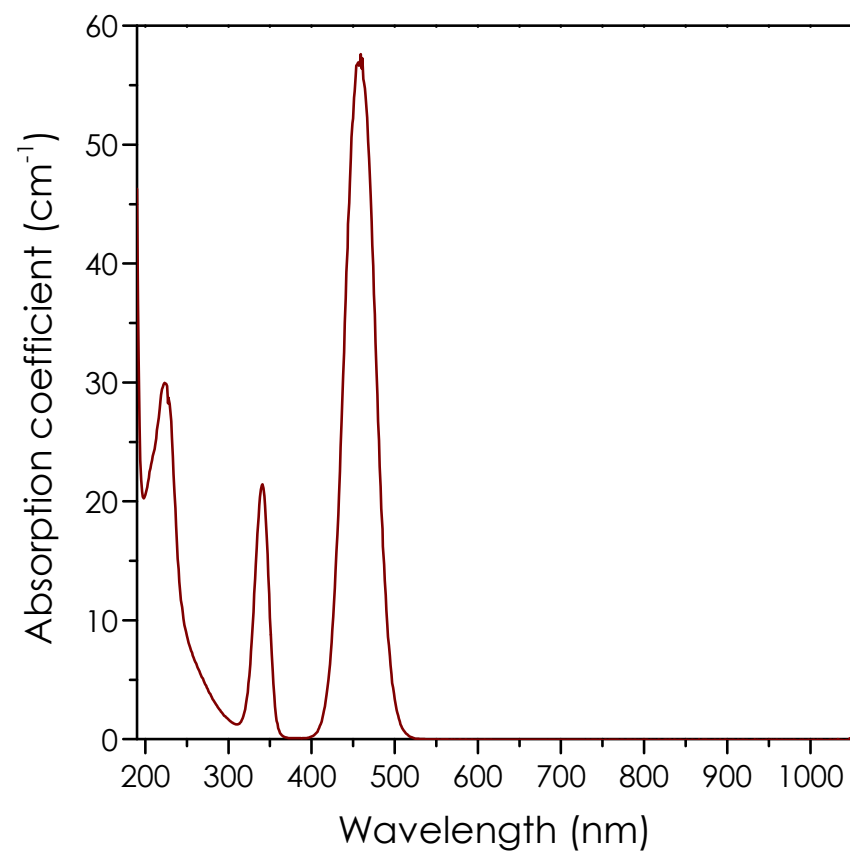
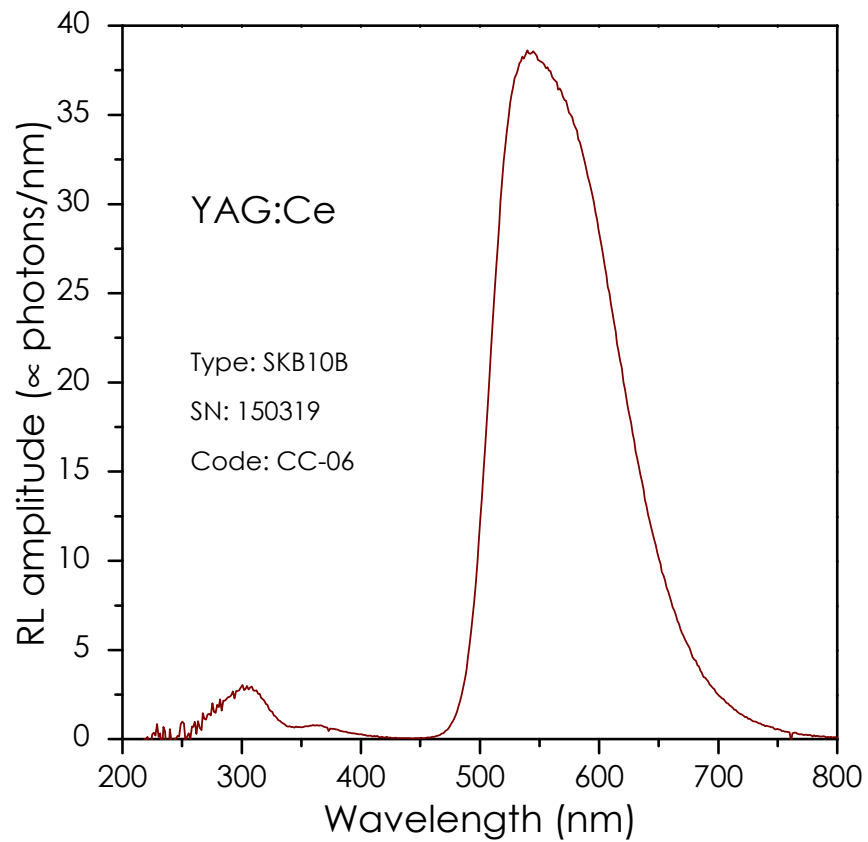




YAG:Ce

Crytur

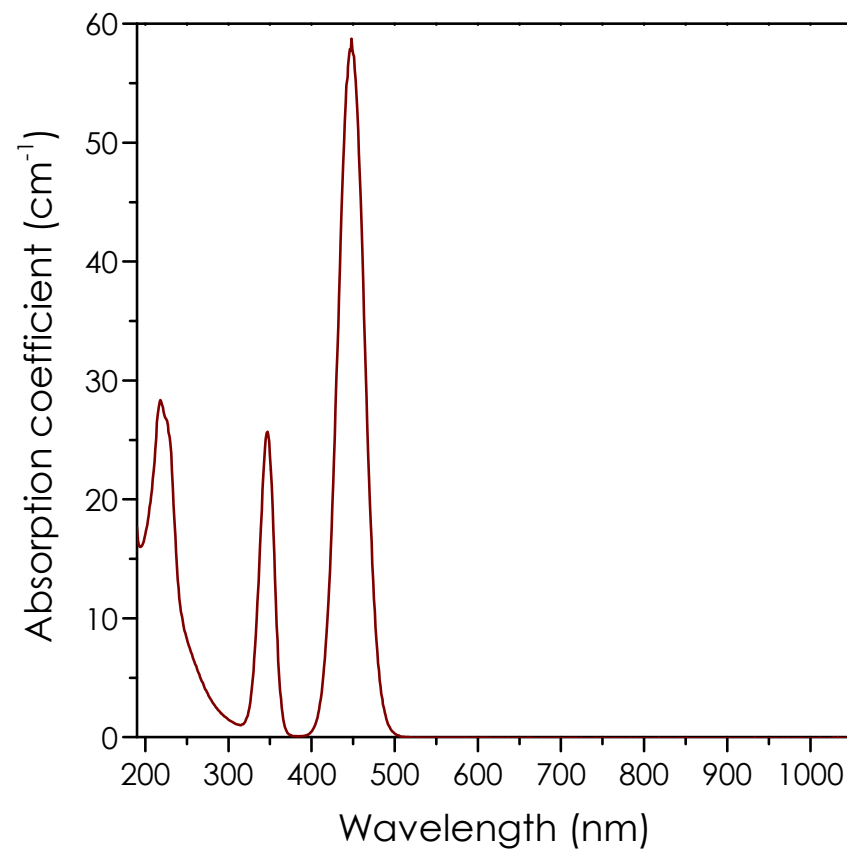
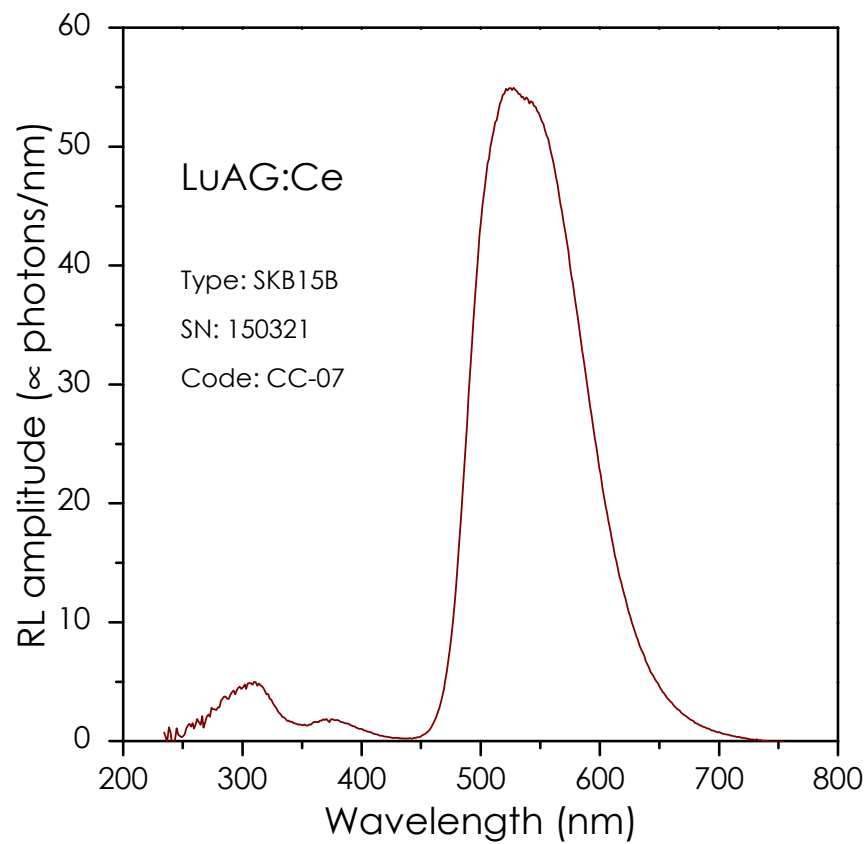
Ø10x1 mm<sup>3</sup>



LuAG:Ce

Crytur

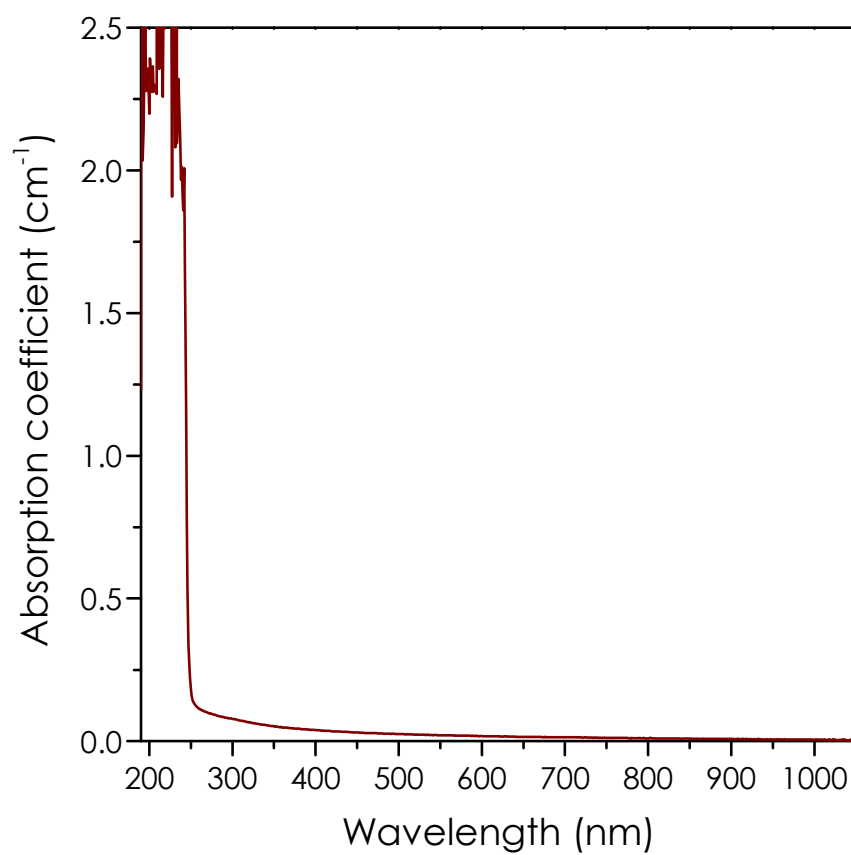
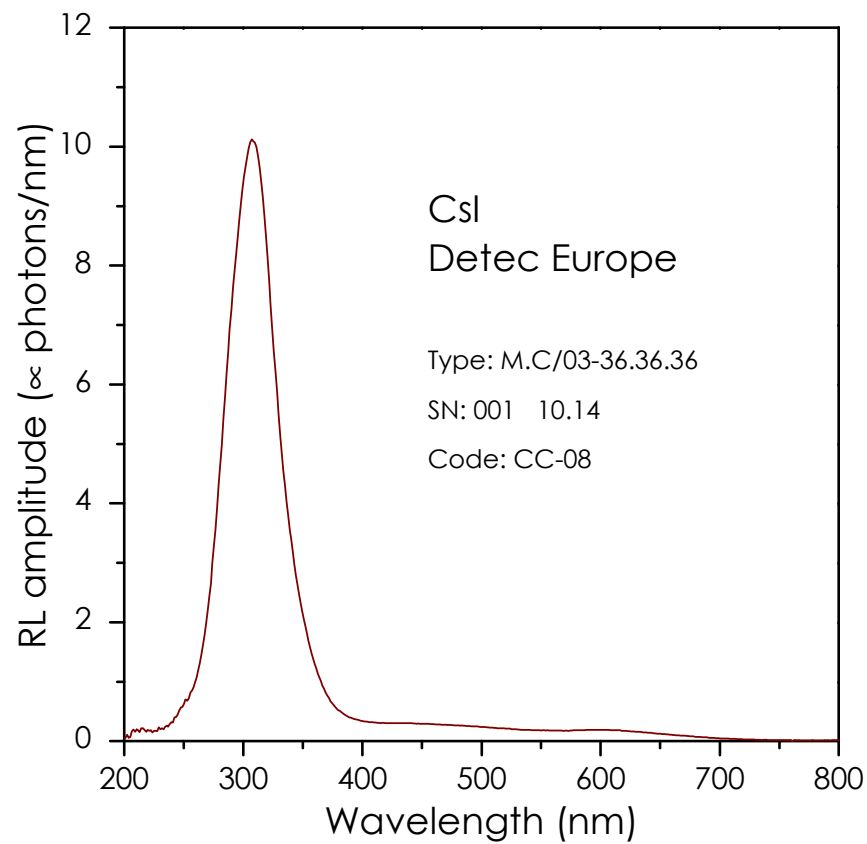
Ø10x1 mm<sup>3</sup>



CsI

Detec

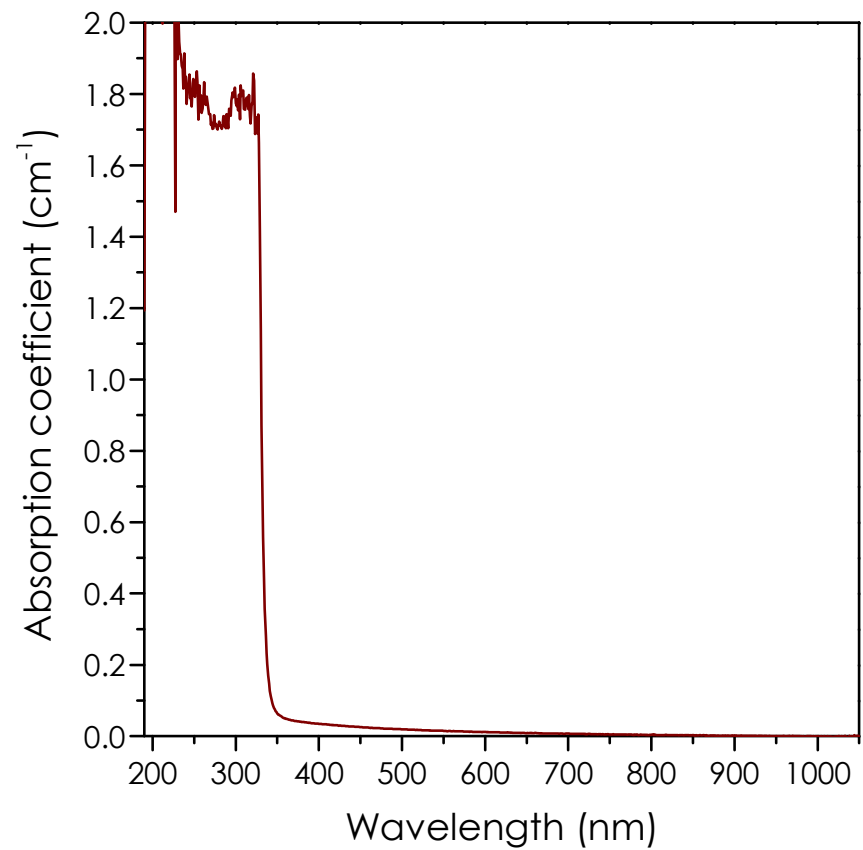
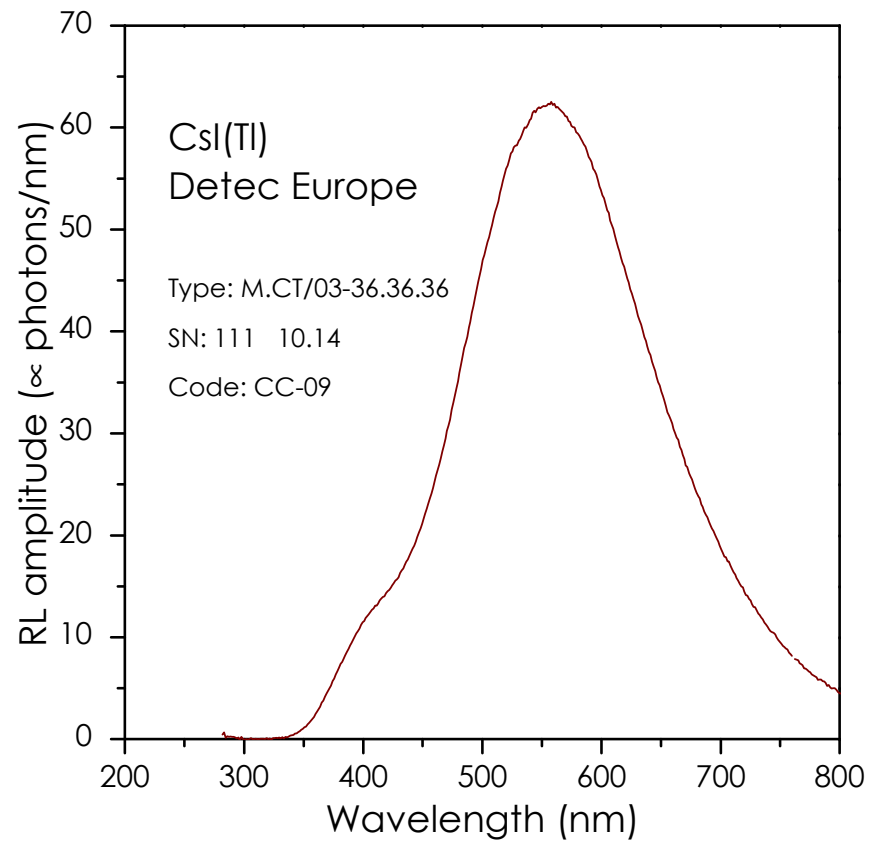
36x36x36 mm<sup>3</sup>



CsI(Tl)

Detec

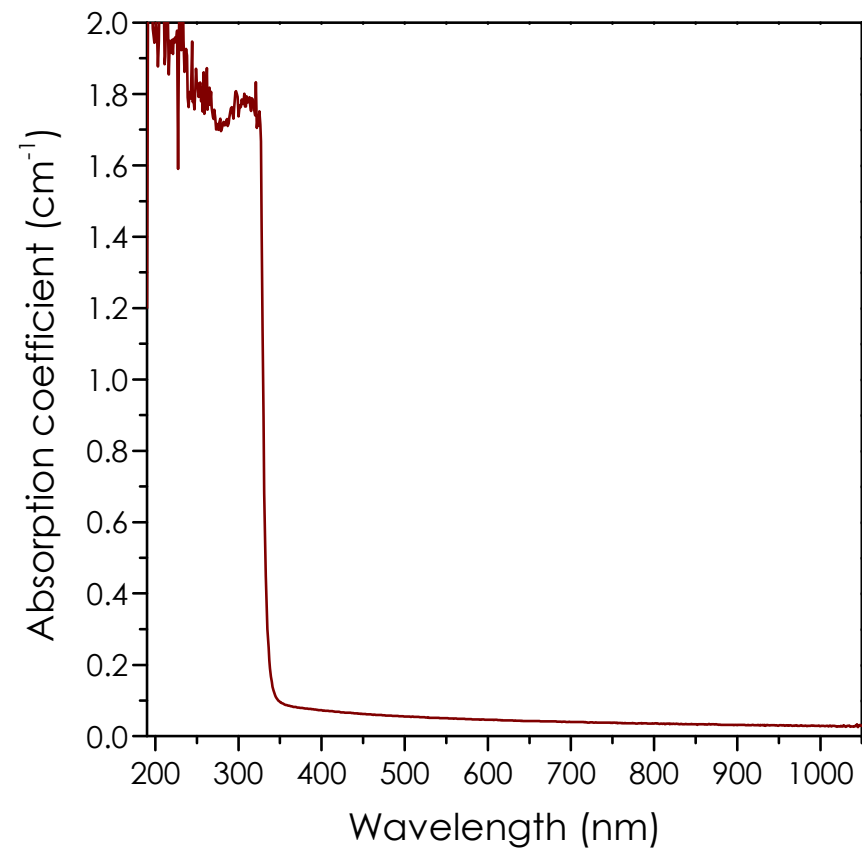
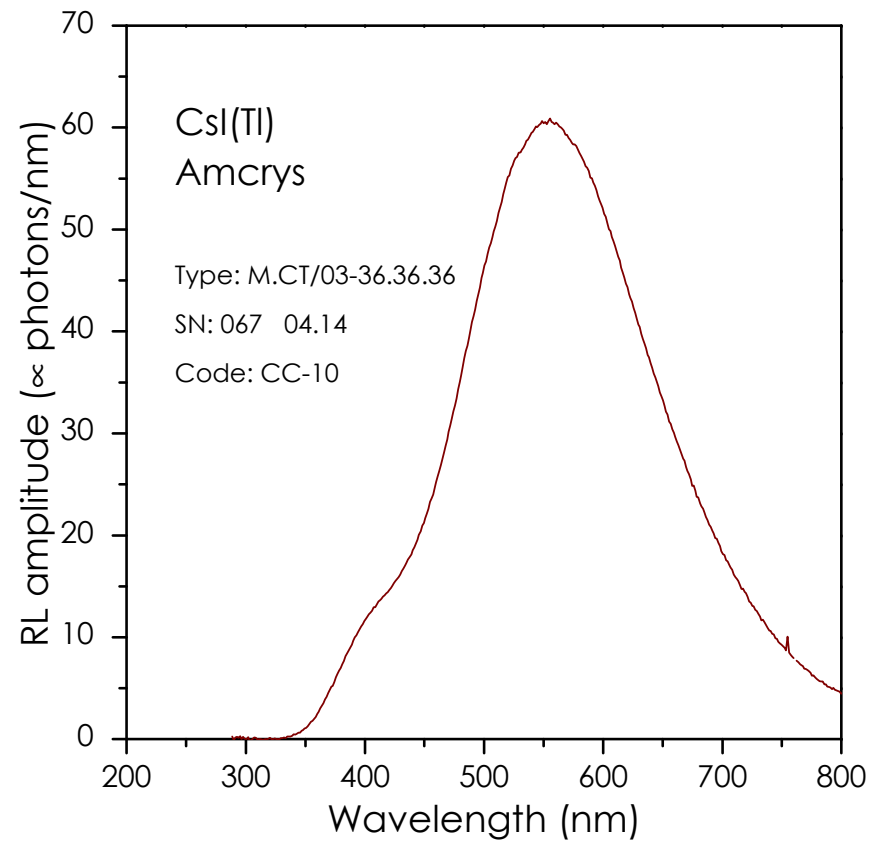
36x36x36 mm<sup>3</sup>



CsI(Tl)

Amcrys

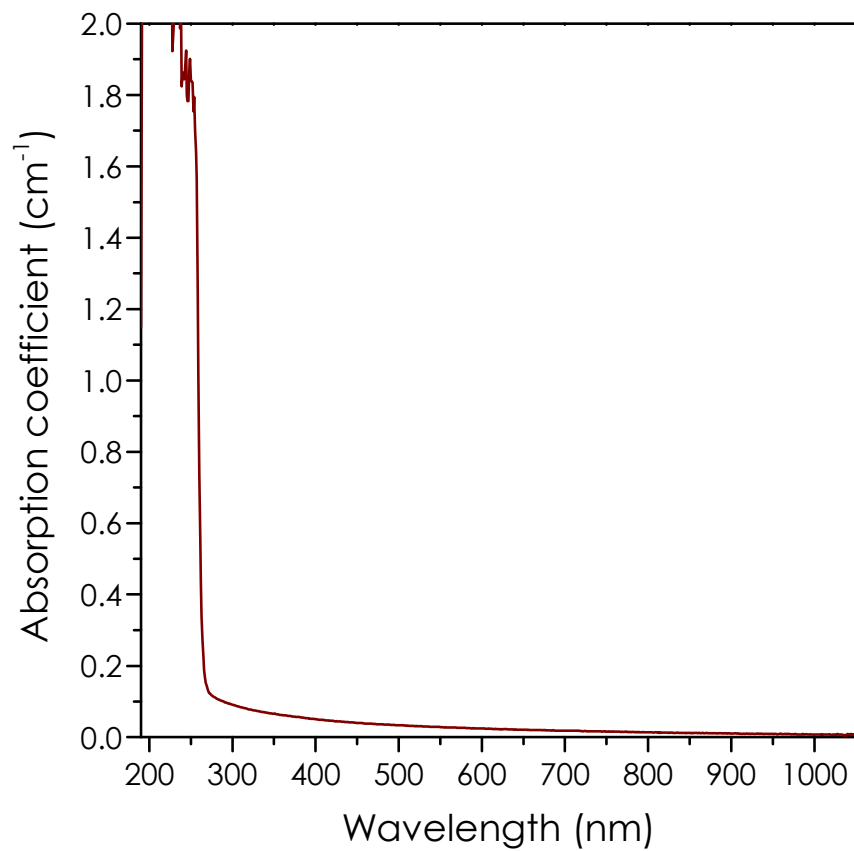
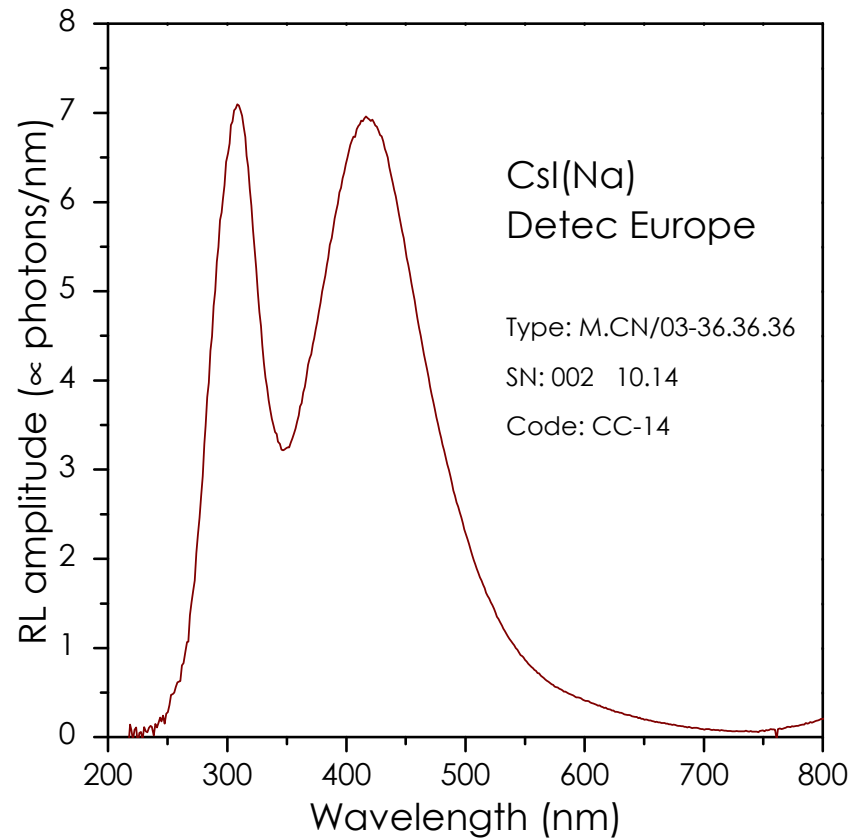
36x36x36 mm<sup>3</sup>



CsI(Na)

Detec

36x36x36 mm<sup>3</sup>



# Efficienza di radioluminescenza

