



安全时刻



NO. 020
2024年9月3日

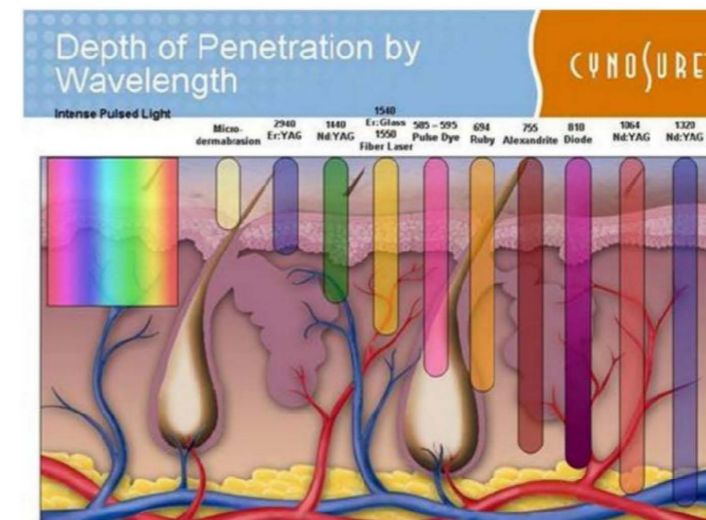
激光安全 (II)

激光危害 眼睛

180nm-315nm	光致角膜炎
315nm-400nm	光化学反应
400nm-700nm	光化学和热效应所致的视网膜损伤
700nm-1400nm	白内障、视网膜灼伤
1400nm-3000nm	白内障、水分蒸发、角膜灼伤
3000nm-1mm	仅为角膜灼伤

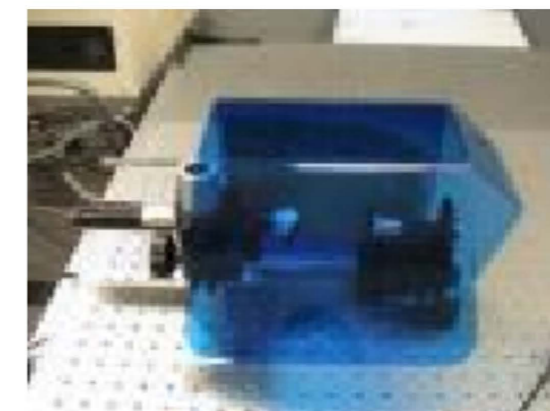
皮肤

180nm-280nm	红斑（阳光灼伤）、加速皮肤的老化、色素沉着
280nm-315nm	色素沉着、暗色、光敏感作用、皮肤灼伤
315nm-400nm	暗色、光敏感作用、皮肤灼伤
400nm-700nm	暗色、光敏感作用、皮肤灼伤
700nm-1mm	皮肤灼伤



安全防护措施

- 联锁装置的屏蔽防护罩
- 激光工作区入口处安装激光警示灯，激光开启灯即亮
- 在激光产品工作区、其防护围封的入口处、激光设备外壳和操作面板的显眼位置张贴警告标识(GB 2894-2008)
- 选用合适的防护眼镜
- 穿长袖、且由阻燃材料制成的工作服
- 激光束路径应避免正常人站立或坐着时眼睛的水平位置，眼睛的视轴不能与出光口平行
- 确保身上无反光物品（包含机械手表、珠宝、首饰等）





Safety Moment



NO. 020
SEP 03, 2024

Laser Safety(II)

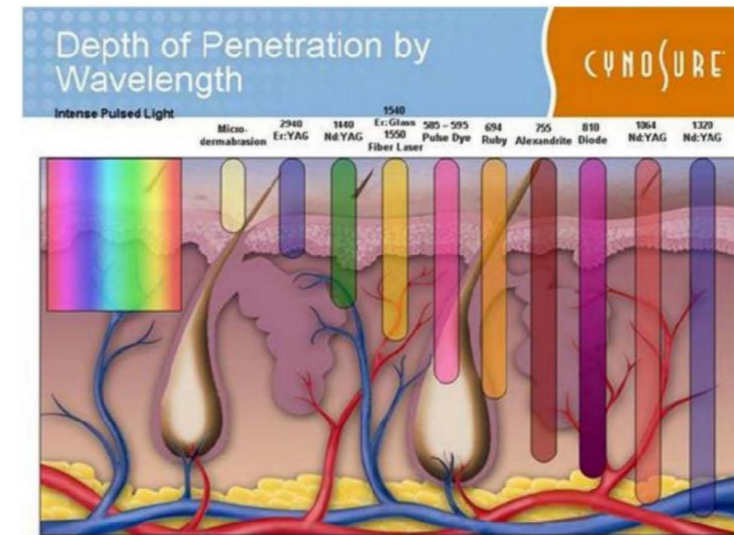
LASER HAZARDS

Eyes

180nm-315nm	Photokeratitis
315nm-400nm	Photochemical reaction
400nm-700nm	Retinal damage caused by photochemical and thermal effects
700nm-1400nm	Cataracts, retinal burns
1400nm-3000nm	Cataracts, moisture evaporation, corneal burns
3000nm-1mm	Just a corneal burn

Skin

180nm-280nm	Erythema (sun burn), accelerated skin aging, pigmentation
280nm-315nm	Pigmentation, dark color, light sensitivity, skin burn
315nm-400nm	Dark color, light sensitivity, skin burn
400nm-700nm	Dark color, light sensitivity, skin burn
700nm-1mm	skin burn



Laser Safety Precautions:

- Shielding shield for interlocking device
- Install laser warning lights at the entrance of the laser operation area; and the laser light will be on when it is turned on
- Post warning signage in conspicuous places such as the laser product working area, the entrance of its protective enclosure and the exterior of the laser equipment (GB 2894-2008)
- Wear appropriate protective eyewear
- Wear long-sleeved work clothes made of flame-resistant materials
- Laser beams should avoid the eye level of a person standing or sitting, and the line of sight should not be parallel to the laser outlet
- Ensure that there are no reflective items on your body (including mechanical watches, jewelry, etc.)

