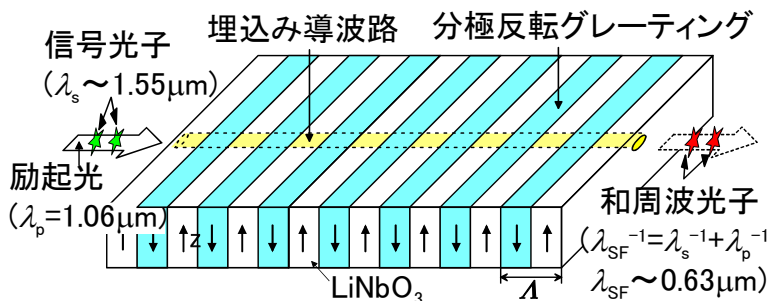
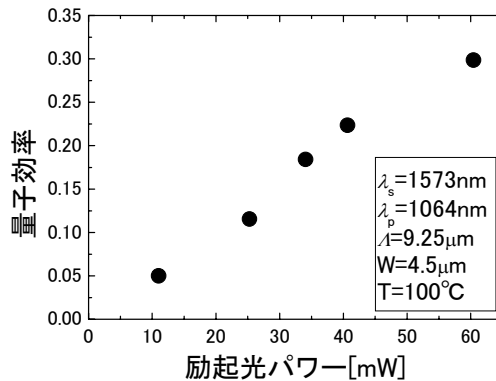


# 光通信波長帯光子検出用埋込導波路型高効率擬似位相整合波長変換デバイスに関する研究

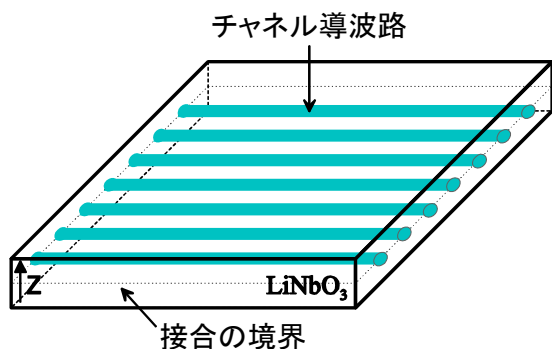
## 逆プロトン交換埋込み導波路擬似位相整合和周波発生デバイス



最大量子効率 30%



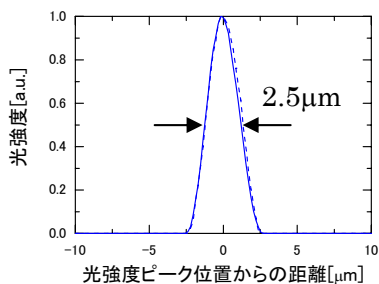
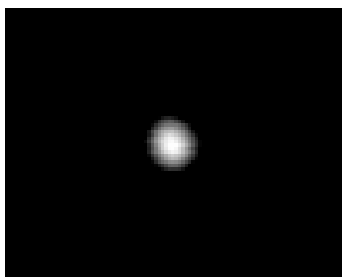
## LiNbO<sub>3</sub>結晶直接接合埋込みアニールプロトン交換導波路



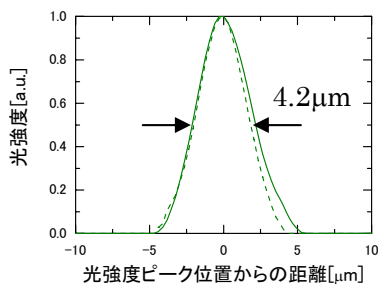
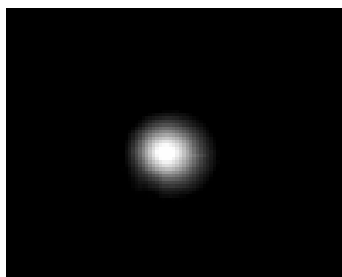
導波特性

対称な導波モード分布  
 1.55μm の光に対して単一モード導波

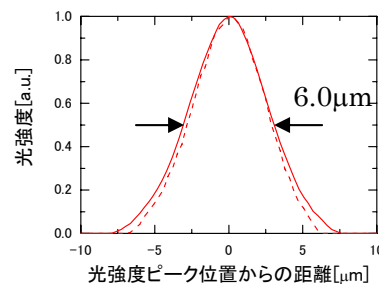
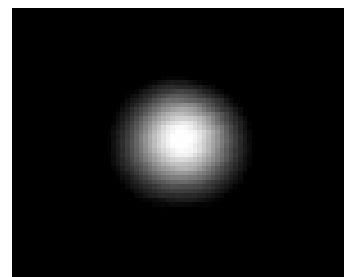
0.67μm



1.06μm



1.55μm



————— 導波路幅方向    - - - - 導波路深さ方向

和周波発生の非線形結合係数見積り  
 $\kappa = 1.6\text{W}^{-1/2}\text{cm}^{-1}$  (非埋込み型の2倍以上)