Known Optimal Values and Classes for Differential Uniformity and Nonlinearity from $\mathbb{F}_{2^n}$ to $\mathbb{F}_{2^m}$

Conditions	Δ_F	Class	$\mathcal{NL}(F)$	Class
$m \leqslant n/2$	2^{n-m}	PN (bent)	$2^{n-1} - 2^{\frac{n}{2}-1}$	bent (PN)
$n/2 < m < n$	$> 2^{n-m}$	-	$\leqslant 2^{n-1} - \frac{1}{2}\left(3 \cdot 2^n - 2 - \frac{2(2^n-1)(2^{n-1}-1)}{(2^m-1)}\right)^{1/2}$	-
$m = n, n$ is odd	2	APN	$2^{n-1} - 2^{\frac{n-1}{2}}$	AB
$m = n, n$ is even			$2^{n-1} - 2^{\frac{n}{2}}$ (Conjectured)	-