Sample Name (by growth)

CA133

Sample Growth Date (approx.)

3/12/2004

Sample Grower	Sample Grower Affiliation
Christoph Adelmann	Palmstrom's group (CEMS)

Sample Growth Comments

series of samples (CA105-like) with variation of p-doping

Sample Motivation

like CA131 but with reduced p-doping

Sample Structure

2.5 nm	Al	~ 0 deg		
5 nm	Fe	~ 0 deg		
15 nm	AlGaAs	n+(5E18/cm^3, Si cell = 1140C)	10% Al	
15 nm	AlGaAs	n/n+ (transition layer)	10% Al	
100 nm	AlGaAs	n (1E16/cm^3)	10% Al	
25 nm	AlGaAs	i	10% Al	
10 nm	GaAs	i	QW	
25 nm	AlGaAs	i	10% Al	
200 nm	AlGaAs	p (3E16/cm^3)	10% Al	
300 nm	GaAs	p (1E17/cm^3)		
--	GaAs	p (1E18) substrate (100)		

Sample Name (by growth)

CA139

Sample Growth Date (approx.)

3/12/2004

Sample Grower	Sample Grower Affiliation
Christoph Adelmann	Palmstrom's group (CEMS)

Sample Growth Comments

series of samples (CA105-like) with variation of p-doping

Sample Motivation

like CA131 but with reduced p-doping

Sample Structure

2.5 nm	Al	~ 0 deg		
5 nm	Fe	~ 0 deg		
15 nm	AlGaAs	n+(5E18/cm^3, Si cell = 1140C)	10% Al	
15 nm	AlGaAs	n/n+ (transition layer)	10% Al	
100 nm	AlGaAs	n (1E16/cm^3)	10% Al	
25 nm	AlGaAs	i	10% Al	
10 nm	GaAs	i	QW	
25 nm	AlGaAs	i	10% Al	
150 nm	AlGaAs	p (1E16/cm^3)	10% Al	
300 nm	GaAs	p (1E17/cm^3)		
--	GaAs	p (1E18) substrate (100)		

Sample Name (by growth)

CA143

Sample Growth Date (approx.)

4/6/2004

Sample Grower	Sample Grower Affiliation
Christoph Adelmann	Palmstrom's group (CEMS)

Sample Growth Comments

Variation on CA139 series

Sample Motivation

Direct copy of CA139

Sample Structure

2.5 nm	Al	~ 0 deg		
5 nm	Fe	~ 0 deg		
15 nm	AlGaAs	n+(5E18/cm^3, Si cell = 1140C)	10% Al	
15 nm	AlGaAs	n/n+ (transition layer)	10% Al	
100 nm	AlGaAs	n (1E16/cm^3)	10% Al	
25 nm	AlGaAs	i	10% Al	
10 nm	GaAs	i	QW	
25 nm	AlGaAs	i	10% Al	
150 nm	AlGaAs	p (1E16/cm^3)	10% Al	
300 nm	GaAs	p (1E17/cm^3)		
--	GaAs	p (1E18) substrate (100)		

Sample Name (by growth)

CA150

Sample Growth Date (approx.)

4/6/2004

Sample Grower	Sample Grower Affiliation
Christoph Adelmann	Palmstrom's group (CEMS)

Sample Growth Comments

Variation on CA139 series

Sample Motivation

like CA139, but with 17% Al content and 5E18 interfacial doping

Sample Structure

2.5 nm	Al	~ 0 deg		
5 nm	Fe	~ 0 deg		
15 nm	AlGaAs	n+(5E18/cm^3, Si cell = 1140C)	17% Al	
15 nm	AlGaAs	n/n+ (transition layer)	17% Al	
100 nm	AlGaAs	n (1E16/cm^3)	17% Al	
25 nm	AlGaAs	i	17% Al	
10 nm	GaAs	i	QW	
25 nm	AlGaAs	i	17% Al	
150 nm	AlGaAs	p (1E16/cm^3)	17% Al	
300 nm	GaAs	p (1E17/cm^3)		
--	GaAs	p (1E18) substrate (100)		

Sample Name (by growth)

CA152

Sample Growth Date (approx.)

4/6/2004

Sample Grower	Sample Grower Affiliation
Christoph Adelmann	Palmstrom's group (CEMS)

Sample Growth Comments

Variation on CA139 series

Sample Motivation

like CA139, but with no QW (just a bulk LED). This is for room temperature measurements; the idea is to only have one set of selection rules governing the luminescence

Sample Structure

2.5 nm	Al	~ 0 deg		
5 nm	Fe	~ 0 deg		
15 nm	AlGaAs	n+(5E18/cm^3, Si cell = 1140C)	10% Al	
15 nm	AlGaAs	n/n+ (transition layer)	10% Al	
100 nm	AlGaAs	n (1E16/cm^3)	10% Al	
25 nm	AlGaAs	i	10% Al	
10 nm	AlGaAs	i	10% Al	
25 nm	AlGaAs	i	10% Al	
150 nm	AlGaAs	p (1E16/cm^3)	10% Al	
300 nm	GaAs	p (1E17/cm^3)		
--	GaAs	p (1E18) substrate (100)		